Framing value propositions in the food waste business: A sociocultural approach

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ARTICLE INFO

ABSTRACT

Food waste is a critical issue to all stakeholders in the modern society. While previous marketing research has addressed food waste from multiple perspectives, it has provided limited attention to the role of start-ups. Consequently, the purpose of this study is to explore how food waste start-ups communicate their value propositions to different stakeholders. We adopt an interpretive and sociocultural framing approach, and empirically analyse interview and documentary data from 24 different food waste start-ups. The findings from this study identify four different sociocultural frames (Salvation, Thrift, Innovation, and Normalisation) that start-ups in the food waste business use to communicate their value propositions and highlight the key features and mechanisms of each frame. This study advances contemporary B2B marketing research by demonstrating how food waste start-ups use sociocultural framing to create demand for and legitimise their novel solutions, and how sociocultural framing can be used to communicate value propositions. For managers, this study offers insights on how different sociocultural frames can be used to problematise, legitimise, and shape new business opportunities for tackling the food waste issue.

1. Introduction

Food waste is one of the most challenging sustainability issues in modern society. It is major and significant, because roughly one-third of the food that is produced globally goes to waste (UNEP, 2021), and wicked and pervasive, because it involves major economic, environmental and social implications for virtually all stakeholders in the society (Bhattacharya & Fayezi, 2021; Närvänen, Mesiranta, Mattila, & Heikkinen, 2020). Consequently, addressing food waste is one of the United Nations' Sustainable Development Goals (United Nations, 2021) and one of the key objectives of the circular economy (Borrello, Caracciolo, Lombardi, Pascucci, & Cembalo, 2017; Lehtokunnas, Mattila, Närvänen, & Mesiranta, 2020).

Given its wide-ranging implications, food waste has attracted increasing marketing research interest across consumer and business-to-business (B2B) domains, examining, for example, how consumers and households consume or make decisions about food (Block et al., 2016; Quested, Marsh, Stunell, & Parry, 2013; Sirola, Sutinen, Närvänen, Mesiranta, & Mattila, 2019) and how producers, retailers, restaurants

and broader supply chains can manage or mitigate food waste and/or surplus (Bhattacharya & Fayezi, 2021; Dora, Biswas, Choudhary, Nayak, & Irani, 2021; Parfitt, Barthel, & Macnaughton, 2010). However, while contemporary marketing research has examined food waste from several perspectives, it has paid only limited attention to an important and emerging organisational stakeholder group in the food waste business: start-ups.

Compared to the established supply chain actors, who operate within prevailing market systems, start-ups are focused on developing new technologies, innovative offerings and broader business ecosystems to solve existing problems (Wouters, Anderson, & Kirchberger, 2018). For example, the number of new companies addressing food waste with novel platform-based business models, digital offerings and other socio-technical innovations has rapidly increased in the market (Ciulli, Kolk, & Boe-Lillegraven, 2020; Mattila, Mesiranta, & Heikkinen, 2020; Mullick, Raassens, Haans, & Nijssen, 2020; Närvänen, Mattila, & Mesiranta, 2021). Given that they disrupt markets by introducing new business models and novel solutions, start-ups play a key role in shifting the institutional norms and practices related to food waste in food supply

chains (Närvänen et al., 2021).

Previous studies have identified that food waste start-ups might act as brokers between food supply chain actors (Ciulli et al., 2020) through, for example, the use of digital platforms (Mullick et al., 2020). However, food waste start-ups face a major problem: How can they communicate value propositions for their solutions that are new to the market? This issue has not received prior research attention. While conventional value proposition research in B2B markets highlights monetary value quantification as the most resonating communication strategy (Anderson, Narus, & Van Rossum, 2006; Patala et al., 2016; Wouters & Kirchberger, 2015), novel food waste solutions are usually difficult to quantify, as they promise various benefits to diverse societal stakeholders but lack performance data and usage experiences due to their newness (Wouters et al., 2018). Thus, instead of monetary value quantification, food waste start-ups need to consider alternative strategies for communicating their value propositions.

In this study, we address this issue by exploring *how food waste start-ups use sociocultural frames to communicate their value propositions*. Frames are social constructions that structure complex messages, and framing offers linguistic tools for social actors to manipulate how stakeholders process and interpret information (Humphreys, 2010; Humphreys & Latour, 2013; Snihur, Thomas, & Burgelman, 2018). Sociocultural framing is a particularly useful strategy to legitimise novel solutions in new and emerging markets, such as the food waste business (Humphreys, 2010), as it goes beyond monetary value and considers a wider range of societal benefits (Karababa & Kjeldgaard, 2014).

Using frame analysis, we analyse a rich set of interview and documentary data from 24 different food waste start-ups operating in Europe. Our findings indicate four different sociocultural frames (salvation, thrift, innovation and normalisation) that start-ups in the food waste business use to communicate their value propositions and then illustrate the key features and mechanisms of each frame. Overall, this study contributes to contemporary B2B marketing literature by demonstrating how food waste start-ups use sociocultural framing to create demand for and legitimise their novel solutions (Gollnhofer, 2017a, 2017b; Närvänen et al., 2021), as well as to value proposition research (e.g. Payne, Frow, & Eggert, 2017; Payne, Frow, Steinhoff, & Eggert, 2020) by introducing sociocultural framing as an alternative communication strategy to the dominant monetary value quantification approach. Taken together, these insights help B2B marketing scholars and managers combat the ever-growing food waste issues by offering new tools to communicate the value that novel and disruptive food waste solutions deliver to different stakeholders in broader market systems.

The remainder of the article is structured as follows. In the next section, we will first review relevant food waste, marketing and value proposition research, and then describe the sociocultural framing approach. This is followed by a description of our methods and empirical findings. Finally, we discuss implications for theory and practice and highlight potential limitations and future research avenues.

2. Emerging food waste business

2.1. Reducing food waste as part of circular economy

The scarcity of natural resources and the impacts of global warming on food production and food security have been increasingly highlighted in recent years. Food waste is one of the wicked problems related to these issues (Närvänen et al., 2020). It can be defined as consisting of both wasted food that is no longer edible for humans (Papargyropoulou, Lozano, Steinberger, Wright, & bin Ujang, Z., 2014) and food surplus that is still edible but for some reason is wasted along the food supply chain. According to a recent report, 931 million tons of food waste were generated in 2019, and household per capita food waste generation is similar across country income groups (UNEP, 2021).

Food waste results from inefficiencies in the food supply chain that are unnecessary and unwanted, yet the solutions are not simple. The wasting of food can occur during all phases in which food is produced and delivered 'from farm to fork': farmers, logistic companies, food manufacturers and processors to retailers, restaurants, food services and households. Furthermore, the food waste problem is related to many dimensions of value, including economic losses and gains, environmental aspects and social and ethical concerns (Mesiranta, Närvänen, & Mattila, 2021).

Circular economy thinking enables the consideration of food waste as a resource (Närvänen et al., 2020; Ranta, Keränen, & Aarikka-Stenroos, 2020). This means prolonging the food cycle by ensuring that it stays in circulation for as long as possible. For example, while retailers' food waste has previously been counted as financial loss only, the present businesses are incentivised to consider the economic, environmental and social value of food. Retailers' food waste can, hence, be donated to charity or redirected to energy or biofuel production. Using surplus food as a resource in something else represents another circular economy-related business model. For instance, wonky vegetables or side flows from food processing can be used to develop new 'food waste products,' and restaurants can invent new meals using surplus ingredients.

Reducing food wastage is also strongly emphasised by the European Union's circular economy strategy (European Commission, 2021). This policy-level objective, alongside the UN's Sustainable Development Goals, has resulted in increased pressure for food companies to address the issue while also creating new business opportunities.

2.2. Marketing perspective on the reduction of food waste

The number of studies related to the food waste issue in both consumer and B2B marketing literature has risen drastically; however, most of this research has usually been focused on the customer end of the solution rather than the firm end (Porpino, 2016). Key studies within the marketing literature related to food waste reduction are presented in Table 1. The current article is positioned in a stream that investigates the shaping of food waste-related markets and service ecosystems.

The first set of studies has focused on food waste-related consumer behaviour, identifying several stages of consumer decision-making connected with everyday practices from planning meals to grocery shopping, storage, preparation and consumption of food (Block et al., 2016; Lehtokunnas et al., 2020; Mattila, Mesiranta, Närvänen, Koskinen, & Sutinen, 2019; Quested et al., 2013; Sirola et al., 2019). Researchers have identified segments based on consumer food waste behaviours and lifestyles, enabling the targeting of these through diverse interventions (Aschemann-Witzel, de Hooge, & Almli, 2020; Aschemann-Witzel, De Hooge, & Normann, 2016).

The second set of studies has paid attention to consumers' willingness to purchase and consume the so-called sub-optimal or imperfect produce, as well as products made from food waste. Price reductions, for instance, can be used to increase consumers' acceptance of these products (Giménez, Aschemann-Witzel, & Ares, 2021). From a framing perspective, these studies provide evidence that the words and images used to describe these foods, such as creating a totally new category, anthropomorphising them or linking them with external motivations, might facilitate consumer acceptance, purchase intentions and willingness to pay (Bhatt et al., 2018; Grewal, Hmurovic, Lamberton, & Reczek, 2019). However, no study has yet addressed how companies use these elements to communicate with stakeholders.

The third set of studies has investigated marketing communications related to food waste reduction. These studies have mostly considered consumers from a cognitive perspective and as targets of awareness-raising campaigns (e.g. Pearson & Perera, 2018), but some studies have adopted a sociocultural view (Närvänen et al., 2021; Sutinen & Närvänen, 2021). However, these studies have not addressed the marketing communications of start-ups that offer new solutions to address food waste.

The fourth set of studies, focusing on the actions of grocery retailers,

Table 1
Summary of the marketing literature related to food waste reduction.

Closely related studies in marketing	Key insights	Examples of authors
Consumer behaviour (decision-making and everyday practices)	Food waste is linked to several decision-making stages and consumption habits (e.g. purchase, preparation, storage and disposal)	Block et al. (2016); Lehtokunnas et al. (2020); Quested et al. (2013)
		Makhal et al. (2020); Principato, Mattia, Di Leo, and Pratesi (2021); Talwar, Kaur, Yadav, Bilgihan, and Dhir (2021)
	Social norms influence consumers' food waste behaviours	
	Segmenting consumers based on food (waste)-related lifestyles has potential in addressing the issue	Aschemann-Witzel, de Hooge, Almli, and Oostindjer (2018); Aschemann-Witzel et al. (2020)
Marketing of suboptimal products	Drivers and barriers to consumer acceptance of suboptimal products	Bhatt et al. (2018); Cooremans and Geuens (2019); Grewal et al. (2019); Loebnitz, Schuitema, and Grunert (2015)
Marketing communication	Several campaigns and interventions have focused on food waste reduction, but they are mostly based on awareness-raising and individual behaviour change	Pearson and Perera (2018); Hebrok and Boks (2017)
	Social media and a sociocultural approach have the potential to prevent food waste at the collective level	Sutinen and Närvänen (2021)
Actions of grocery retailers	Food waste reduction has become an increasingly important sustainability goal for food retailers	Cicatiello et al. (2016); Gruber et al. (2016); Aschemann-Witzel et al. (2016)
Co-ordinating multi-stakeholder relationships	There is need for multi-stakeholder collaboration to tackle the food waste issue in the existing food system	Bhattacharya and Fayezi (2021); Dora et al., 2021; Mesiranta et al. (2021)
Shaping food waste-related markets and service ecosystems	Social movements play a key role in legitimising and normalizing food sharing	Gollnhofer (2017a, 2017b); Gollnhofer et al. (2019)
	Service innovations are developed for food waste reduction	Baron et al. (2018) Ciulli et al. (2019); Harvey, Smith, Goulding, and Illodo (2020); Mullick et al. (2020); Mattila et al. (2019)
	Food waste can be reduced through digital platforms and other technological innovations	Närvänen et al. (2021)
		This study
	Institutional work conducted by food waste start-ups is an important driver of change	
	How food waste start-ups use sociocultural frames to communicate their value propositions	

has shown that food waste reduction is closely linked with environmental, economic and social values (Cicatiello, Franco, Pancino, & Blasi, 2016) and has strategic relevance for increasing sustainability among retailers (Aschemann-Witzel et al., 2016). Retaining the value of recovered food is a crucial issue for retailers, which can also alleviate the

moral burden that store managers experience (Gruber, Holweg, & Teller, 2016). However, these studies have not investigated the ways in which various values are communicated to stakeholders.

The fifth set of studies has focused more broadly on managing stakeholder relationships throughout the existing food system. While the need for collaboration between the stakeholders has been identified (Bhattacharya & Fayezi, 2021; Dora et al., 2021; Mesiranta et al., 2021), there is not yet an understanding of how this engagement is created as a sociocultural process.

The final set of studies concerns the shaping of food waste-related markets and service systems. These studies have emphasised more radical changes in the food system through social movements, service and technological innovations. They have focused on the legitimation and normalisation processes of food waste reduction efforts (Gollnhofer, 2017a; Gollnhofer, Weijo, & Schouten, 2019; Makhal, Robertson, Thyne, & Mirosa, 2020). Furthermore, in the contemporary market space, the prevention and reduction of food waste has attracted new business activities and novel solutions. Business activities have emerged in various parts of the food supply chain, including technological innovations, digital platforms (Ciulli et al., 2020; Mullick et al., 2020) and mobile applications targeted at consumers and restaurants, as well as new products developed from surplus food (Mattila et al., 2020). Food waste businesses take advantage of the inefficiencies inherent in food chains to create new types of value. In accordance with the circular economy, the central goal of food waste businesses is to increase the efficient use of resources and thereby reduce the ecological impacts of food production. Through operating as circularity brokers (Ciulli et al., 2020) between supply chain actors or through disrupting and challenging the norms, values and practices that result in food waste (Närvänen et al., 2021), start-ups play an important role in the transition towards a more sustainable food system. Building resonating value propositions is a central mechanism for start-ups to succeed in the market, yet the way they accomplish this requires more research effort.

2.3. Communicating value propositions in the marketing literature

In the marketing literature, value propositions are considered firms' most important strategic tools for communicating how they will co-create value with their customers (Payne et al., 2017). Essentially, value proposition is a promise, statement or description of the key benefits that a firm offers to its targeted customer segments and broader stakeholders (Anderson et al., 2006; Frow et al., 2014). While value propositions can offer a wide range of benefits (Corvellec & Hultman, 2014; Patala et al., 2016; Ranta et al., 2020), it is generally accepted that quantifying the economic benefits and monetary implications to customers' business leads to the most resonating value propositions, especially in the B2B context (Anderson et al., 2006; Hinterhuber, 2017; Wouters & Kirchberger, 2015). In business-to-consumer (B2C) contexts, value propositions can also entail social and symbolic aspects (Rintamäki, Kuusela, & Mitronen, 2007). For instance, in retailing, the value propositions are built on understanding the different shopping motivations of consumers, such as utilitarian or hedonic, to position the retailer in the market (Yrjölä, Saarijärvi, & Nummela, 2018). However, value propositions are usually discussed in the literature from the viewpoint of individual organisations (or their customers) rather than from a broader sociocultural perspective.

Value propositions are particularly important for start-ups that offer novel and/or radical solutions, as there is often limited prior understanding, information and experience about what their innovative solutions actually do, how they perform relative to other competitive alternatives and the potential benefits they deliver to different customer segments (Coviello & Joseph, 2012; Wouters et al., 2018). Therefore, the value proposition of a start-up needs to go beyond mere benefit statements and convey the (existing or latent) customer problem, how the start-up's offering will help the customer solve it, and only then demonstrate the potential customer benefits (Wouters et al., 2018). In

other words, start-ups with innovative solutions need to frame their value propositions around customer problems and only then focus on potential customer benefits.

However, understanding and communicating customer problems is particularly challenging in the food waste business as they are often wicked in nature and experienced by multiple stakeholders (Närvänen et al., 2020). Furthermore, addressing such problems usually requires complex solutions that involve diverse actors and broader institutions (Mesiranta et al., 2021) and promise a wide range of benefits to various societal stakeholders (Ranta et al., 2020). Capturing all this complex information into the value proposition would require a broad lens that goes beyond individual customers' problems and takes into consideration wider societal implications.

So far, however, most contemporary value proposition research has tended to focus on B2B markets, which is a context that emphasises monetary benefits to business customers (e.g. Keränen, Terho, & Saurama, 2021; Payne et al., 2020). This was echoed by Ranta et al. (2020, p. 292), who noted that 'Much of the previous CVP [customer value proposition] literature has been built around the idea that quantified benefits and their monetary worth to relevant, often firm-level stakeholders are at the heart of resonating CVPs' (for an overview of the contemporary value proposition literature, see Table 2). Thus, while the current value proposition literature offers guidance to firms who operate in B2B markets, focus on quantifying monetary benefits and have a limited number of business customers, it offers less insights to firms who operate in industries that include more diverse customer and

Table 2
Overview of empirical studies that consider how value propositions should be communicated to key stakeholders.

Study	Context	Dominant framing approach	Target stakeholders
Anderson et al. (2006)	B2B markets	Monetary value quantification	Business customers
Terho, Haas, Eggert, and Ulaga (2012)	B2B markets	Monetary value quantification	Business customers
Emerson (2003)	B2B markets	Quantification of social and financial returns	Investors and society
Payne and Frow (2014a)	Financial services and telecom	Quantification of financial benefits	Business and retail customers
Payne and Frow (2014b)	Healthcare	Identification of the key differentiation and cost drivers	Consumers and healthcare sector
Wouters and Kirchberger (2015)	Technology start-ups	Monetary value quantification	Business customers
Patala et al. (2016)	Metallurgical and automotive	Monetary value quantification (of economic, environmental and social benefits)	Business customers and society
Hinterhuber (2017)	B2B markets	Monetary value quantification	Business customers
Sakyi-Gyinae and Holmlund (2018)	B2B markets	Benefit quantification	Business customers
Wouters et al. (2018)	Technology start-ups	Monetary value quantification	Business customers
Nenonen et al. (2020)	Multi-industry (B2B & B2C)	Monetary value quantification and verification	Market systems
Ranta et al. (2020)	B2B suppliers in the circular economy	Quantification of the economic, environmental, functional and social benefits	Business customers and wider societal stakeholders
This study	*Start-ups in food waste industry*	*Sociocultural framing*	*Consumers, businesses and the wider society*

stakeholder bases and a wider range of potentially resonating benefits, such as in the food waste business.

2.4. Sociocultural framing approach to the value propositions

To gain a deeper understanding of how start-ups in the food waste business communicate value propositions, we combine insights from a sociocultural perspective and a framing theory approach. Instead of viewing individual actors and their decisions as isolated entities and events, the sociocultural perspective considers how and why actor behaviours manifest in a broader and arguably more realistic sociocultural context that includes other social groups and broader societal norms, values and expectations (Moisander & Valtonen, 2006). In this light, individual actors take cues from their peers and try to align their behaviours according to what is perceived as acceptable in the broader society. Another key tenet of the sociocultural perspective is an emphasis on language as a crucial means of mediating the processes people use to socially construct knowledge and negotiate shared meanings and beliefs (Vygotsky, 1986). In other words, language can be used as a tool to shape individual and collective actors' perceptions of reality and what is considered socially acceptable. This suggests that messages can be constructed in a way that shapes sociocultural beliefs and norms and, subsequently, actor behaviours (Ross & Nisbett, 1991).

Framing theory suggests that the ways in which messages are constructed or 'framed' influence the ways in which individuals, groups and broader societies interpret and process information (Goffman, 1974). Framing can be applied at the individual, cognitive level or as interpersonal meaning construction (Dewulf et al., 2009). Here, framing refers to an interpretive meaning-construction process that is active, dynamic and processual (Benford & Snow, 2000; Goffman, 1974). Frames are generally understood as socially constructed abstractions, mental representations and/or simplifications of a social phenomenon and can help recipients contextualise and structure complex messages and their meanings (Snihur et al., 2018). Framing can then be considered an ongoing act of constructing and negotiating 'what is going on' (Goffman, 1974, p. 8). It includes 'select[ing] some aspects of a perceived reality and make[ing] them more salient in communicating […] to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation' (Entman, 1993, p. 52). The framing techniques can range from stories and metaphors to symbols and visual images (Fairhurst & Sarr, 1996) and appeal to conflicts, consequences, human interests, morality or responsibility ((Entman, 1991)). Frames can present the same information in different ways or emphasise a specific subset(s) of relevant information (Snihur et al., 2018). Much like sociocultural factors, framing is also a key part of communicating and processing information between different social actors on a daily basis and is particularly visible in the context of journalism, advertising and politics, where specific meanings and language are used to gain new customers and social support.

In the context of this study, the adoption of the sociocultural framing approach to communicate value propositions has three distinct advantages. First, it helps us go beyond the dominant view that emphasises individual customers and considers the role of broader sociocultural value drivers (Karababa & Kjeldgaard, 2014). Second, it helps us go beyond value quantification and calculation strategies (Anderson et al., 2006; Patala et al., 2016) and focus on alternative framing strategies for communicating value propositions. Finally, it helps us consider how firms can leverage and harness broader societal forces to construct resonating value propositions. Taken together, the sociocultural framing approach allows us to better understand, capture and unpack how start-ups in the food waste business communicate their value propositions to different customers and stakeholders. In line with Humphreys (2010), we anticipate that engaging stakeholders through economic incentives or social networking alone is not enough, but to legitimise their business activities, start-ups also need to use rhetoric: metaphors and selective framing efforts to propose arguments that support their own and their

stakeholders' interests.

3. Methods and data

3.1. Research approach

To examine how start-ups in the food waste business use sociocultural frames to communicate value propositions, we adopted an exploratory and qualitative research approach. An exploratory strategy is particularly suitable for situations that aim to build theoretical insights from empirical observations (Corbin & Strauss, 2015). An interpretive, qualitative approach allows for examining complex social issues as well as cultural forms and realities in situ that are embedded in value propositions in the food waste business, such as signs, messages, meanings and language (Moisander & Valtonen, 2006).

Given that most of the extant value proposition research is focused on benefit quantification and monetary calculation (Anderson et al., 2006; Wouters & Kirchberger, 2015), which assume a relatively objective and reductionist ontology, there is a need for more holistic analyses that would consider alternative and richer depictions of resonating truth statements. Hence, we adopted a social constructionist approach, which acknowledges the possibility for multiple truth statements to co-exist simultaneously and that their nature is socially constructed among various members of the society (Järvensivu & Törnroos, 2010). In particular, the social constructionist perspective allows us to explore how different messages and meanings are constructed and communicated through value propositions to influence different societal stakeholders.

3.2. Data collection

Our data collection was conducted in two major phases (Table 3). In the first phase (2017–2019), we interviewed nine European start-up companies in the food waste industry. With the goal of generating as diverse and information-rich a sample as possible, we used theoretical

Table 3
Overview of the empirical data and their role in this study.

Data collection	Phase 1	Phase 2
Period	2017–2019	2020–2021
Type of data	Qualitative interviews and documentary data	Documentary data
Quantity	10 interviews with nine food waste start-ups, 115 pages of documentary data concerning the same firms	150 pages of documentary data concerning 15 firms
Start-ups	CozZo (BG), Fiksuruoka.fi (FI), FoPo (DE), Food waste restaurant Loop (FI), Mimica Touch (GB), Neighbourfood (FI), Olio (GB), ResQ Club (FI), WasteMaster (FI)	Foller (FI), FoodTracks (DE), Foresightee (BE), Froodly (FI), Kitro (CH), Kromkommer (NL), Leroma (DE), Matsmart (SE), Mitakus (DE), OddBox (GB), Relex (FI), Rubies in the Rubble (GB), Spare Snacks (GB), Unverschwendet (AT), Wonky (GB)
Nature of inquiry	Deep and exploratory	Broad and elaborative
Role in analysis	To develop a preliminary framework and understanding of the emerging research phenomenon	To elaborate and extend the preliminary framework, provide supportive evidence and illustrative examples from a larger number of firms and enhance the generalisability of the findings
Key results	Identification of four distinct yet preliminary sociocultural frames for communicating value propositions in the food waste industry	Elaboration of the identified sociocultural frames and their key features

and purposive sampling logic (Patton, 2015) and selected food waste start-ups that operated in i) different stages of the food supply chain, ii) both B2B and B2C markets and iii) different geographical locations, and were of different sizes. The interviews were conducted with senior directors, such as founders, CEOs and heads of marketing and service development. This ensured that the informants had deep knowledge and experience of the firm's business model, vision and marketing strategy.

All interviews were conducted by two of the authors of this paper, with each interview lasting approximately 60 min. Interviews with six Finnish start-ups were held face-to-face in Finland in Finnish, and those with four start-ups from outside Finland were conducted remotely through Skype or Google Meet in English. Each interview was recorded and transcribed verbatim. We used a broad, semi-structured interview guide with open-ended questions to facilitate naturally occurring data and subsequent probing of the themes that emerged in the interviews (Creswell & Poth, 2016). The broad questions focused on the companies' strategic objectives, business model, external communication practices and stakeholder engagement in the food waste business. The interviews helped us understand i) how the selected firms operated in the food waste industry, ii) the key sociocultural drivers that influenced the start-ups in this context and iii) how the firms communicated their value propositions to different stakeholders. This allowed us to elicit insights into the firms' intended value proposition communication strategies, as well as the underlying reasons, logics and dynamics that influenced specific communication decisions.

We also generated a wide range of documentary data, which included 'naturally occurring data' from the start-ups' own websites, marketing materials, blogs, social media posts, as well as from broader news and media articles that involved the studied firms. This helped us gain a richer understanding of the focal research phenomenon and capture the value propositions that these firms used in practice. At this stage, four distinct yet preliminary sociocultural frames for communicating value propositions were identified from the data.

In the second phase (2020−2021), we expanded our data collection. With the goal of deepening and broadening the preliminary findings that emerged in the first phase, we used internet search engines to identify 15 additional food waste start-ups that matched our sampling criteria and operated in Europe, and then searched for relevant and publicly available data about their food waste solutions, including company web pages and other marketing material, news articles, blogs and other social media posts from platforms such as LinkedIn and Facebook. In both phases, blogs and websites were used as documentary data, as they show how food waste and its commercial redistribution are communicated to (potential) customers who are already considered a target group. Furthermore, analysing news items was considered equally important, as they illustrate how the food waste issue and potential solutions are communicated to the wider public. The use of media articles, such as news items, is an established practice in the framing approach (Humphreys & Latour, 2013). The inclusion of both external communication practices aimed at limited target groups or segments and the communication practices aimed at the public enabled us to generate a richer and more holistic understanding of the focal phenomenon. During this phase, we generated approximately 150 pages of material for documentary data analysis. Overall, the second phase of the data collection helped us enrich the existing datasets and, consequently, expand the findings emerging from the first phase.

3.3. Data analysis

The goal of our data analysis was to identify what types of sociocultural frames are used by food waste start-ups to communicate their value propositions. The analytical coding process was conducted in three key stages. In the first stage, we used the interview and documentary data from the first data collection phase (nine food waste start-ups). The first round of coding was led by two researchers who were also involved in generating the data. Informed by the framing approach

(Entman, 1993; Snihur et al., 2018), we used theoretical coding and focused on seeking key framing features, such as metaphors, problematisations, slogans, appeals or visualisations (from the documentary data), that indicated the presence or utilisation of specific thematic frames (Creed, Langstraat, & Scully, 2002). As we clustered similar features, four relatively distinct sociocultural frames (salvation, thrift, innovation and normalisation) were identified from the data. We refined our interpretations by subjecting the emerging frames to broad and dichotomising questions (i.e. does it emphasise stability over change, is food waste seen as a threat or opportunity and does it address individuals or institutions) that helped us to contrast and further categorise different frames. At the end of the first coding stage, all researchers jointly analysed and compared the preliminary frames and their key features, and potential differences were jointly discussed and agreed upon.

In the second coding stage, we used documentary data from the second data collection phase (15 new food waste start-ups) to complement and qualitatively validate our initial findings. The focus was on categorising language use and identifying idea elements in the data, such as repetitive keywords, central themes, images and metaphors describing each frame (Creed et al., 2002).

The second coding stage was led again by the same two researchers who led the first stage to maintain consistency, and the remaining authors were involved in jointly discussing, comparing and revising the coding outcomes. Again, differences were jointly discussed and agreed upon. While no new major frames were identified from the second dataset, it enriched our interpretations of the initial four frames by providing evidence and illustrative examples from a broader set of firms. Together, the datasets helped us compare findings with the constant comparative method across different sociocultural fields, such as marketing communications, media discourses and research interviews. The analysis of the documentary data helped us complement the interview data by i) capturing broader communication practices, such as metaphors, visuals and slogans, and ii) matching and expanding the intended communication practices indicated by the interviewees with the observed communication practices. Thus, the combination of interview data and documentary data provides a more holistic understanding of the research phenomenon and enhances the credibility and theoretical generalisability of the results.

In the third stage, we subjected both datasets to focused coding (Saldaña, 2021) and analysed how the identified frames were visible in the data to reveal, compare and contrast the specific features and characteristics of alternative frames and, ultimately, to further develop empirical observations and insights regarding the studied phenomenon.

During the third and final stage of data analysis, all authors discussed and refined the emerging findings collectively and iteratively over several meetings until it was concluded that no new insights were identified.

In conclusion, to enhance the insightfulness and relevance (Moisander & Valtonen, 2006) of our empirical analysis, we used two datasets that contributed to the richness and depth of interpretations, drew insights from several literature streams and took advantage of multiple researchers to theorise and interpret the findings. In the next section, raw data quotations are used to illustrate links between the data and analysis, as well as interpretations. We use documentary data quotations to emphasise how firms communicated the value propositions to multiple stakeholders. To summarise, Fig. 1 illustrates the entire journey of data collection and analysis.

4. Findings

The findings of this study illustrate four different sociocultural frames (salvation, thrift, innovation and normalisation) that food waste start-ups use to communicate their value propositions. The frames reveal different ideologies, understandings and ways in which start-ups communicate their value propositions and tackle the food waste issue. In the following section, we describe each identified frame in detail and highlight the key features and mechanisms of each frame with illustrative examples from the data. Finally, Table 4 summarises the findings.

4.1. Salvation frame

In the first identified frame, *salvation,* the utilisation of food waste first appears as an environmental act. The metaphor of salvation is used to depict activities at both micro- and macro-levels, including rescued food and the environment, as well as 'ending world hunger' (Case Fopo, documentary data/website, 2021). Hence, salvation depicts active acts in which the object of action is saved from otherwise-faced destruction. Passive waiting leads to inescapable negative outcomes. The roles played in the metaphor are given to customers ('food waste heroes'), anthropomorphised food waste (victim), food ending to a trash bin (crime) and the one who causes the emergence of food waste (villain). Previous research has shown that the means for anthropomorphising wonky fruits have an impact on how consumers value fruit products (Cooremans & Geuens, 2019). Thus, the frame appeals to customers emotionally by humanising the problem. The salvation frame is visualised using photos of considerable edible food in landfills and at farms.

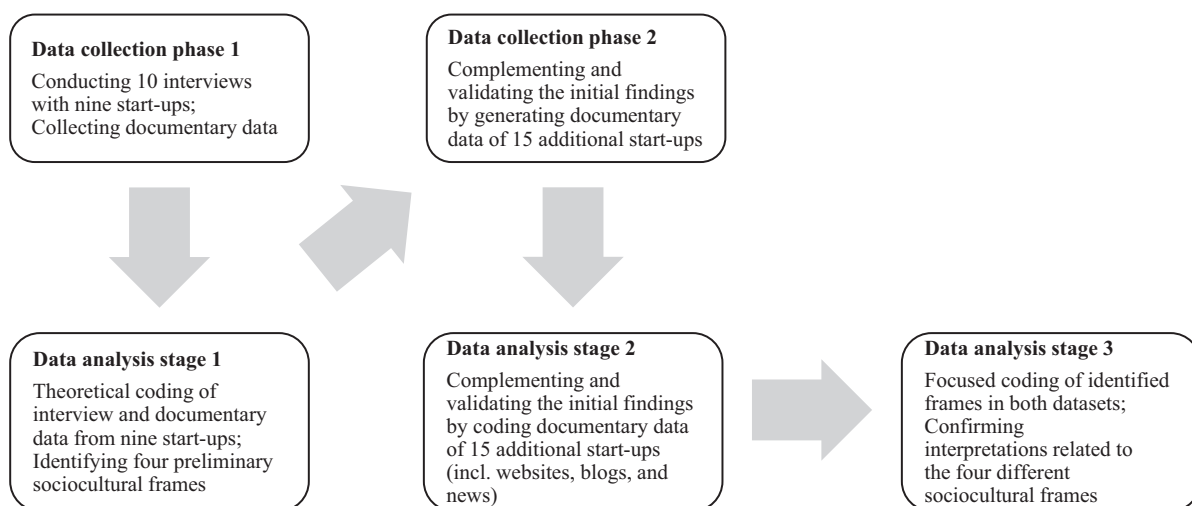Salvation is also closely related to ecological ideology, which does

Data collection phase 1	Data collection phase 2
Conducting 10 interviews with nine start-ups; Collecting documentary data	Complementing and validating the initial findings by generating documentary data of 15 additional start-ups

Data analysis stage 1	Data analysis stage 2	Data analysis stage 3
Theoretical coding of interview and documentary data from nine start-ups; Identifying four preliminary sociocultural frames	Complementing and validating the initial findings by coding documentary data of 15 additional start-ups (incl. websites, blogs, and news)	Focused coding of identified frames in both datasets; Confirming interpretations related to the four different sociocultural frames

Fig. 1. Illustration of the research data collection and analysis process.

Table 4
Summary of the findings of the frame analysis.

	Salvation	Thrift	Innovation	Normalisation
Purpose of the frame	'Save food, the planet and the people suffering from hunger'.	'Save time, money, effort and other resources while reducing food waste'.	'A solution that one has never seen before'.	'Everyone else is doing it too'.
Metaphor	Food is not bought, it is saved	Food waste is like throwing money in the trash	Revolutionising food production	We are just a regular restaurant
Slogan	'Be the saviour of the food and the planet'.	'Cheap, quick and easy!'	'Utilise technological development!'	'Why aren't you using/doing it already?'
Visualisation	Photos of considerable edible food in landfills and at farms	Bright colours and big fonts emphasising low prices and discount rates	Figures and images demonstrating digital networks, images of smart devices, images and videos demonstrating high-tech innovation	Photos of food waste used in fancy restaurant meals
Ideological roots for the frame	Sustainable consumption, corporate social responsibility, environmental movement	Being thrifty as a protestant virtue, industrial symbiosis	Technological optimism, platform economy, urban culture	Avoiding and reducing food waste should be the normal thing to do in each phase of the food supply chain
Consequences	Global warming slows down, the environmental catastrophe gets prevented	Eco-efficiency, increased profitability and time, money and effort saved for other things and tasks	New technology enables an easy adaption of services avoiding and preventing food waste for companies and consumers.	Avoiding and reducing food waste becomes a normal, unquestioned part of an actor's everyday routine
Appeals	Emotional	Rational	Social distinction	Social norms
Scope of change	Weak individual-level change	Weak individual-level change	Strong system-level change	Weak system-level change

not allow the destruction of nature for the sake of food production and consumption. This ecological ideology base of the frame depicts food waste as an issue that needs to be successfully defended using different means of combat. The salvation frame can thus best be described through threats, such as depictions about what will happen if the activities are allowed to continue the same way as so far, leading to environmental destruction, escalating unequal distribution of food and throwing away edible food due to individuals' ignorance. The threats, such as the salvation frame itself, focus on the emotional and ideological appeal of the food waste issue. Below are examples of how this frame is used in the data.

> During less than four years, the Finnish mobile phone application has saved 2 million meals from ending up in landfills. This amount of food equates to the carbon emissions caused from driving a thousand times around the Earth by car.
>
> (Case ResQ Club, news, 2019)

> An alternative for a garbage bin death (Case Food waste restaurant Loop, magazine article, 2016).

> Our application offers restaurants and consumers the possibility to save meals which are still in excellent shape, but are in danger of being thrown to the bin.
>
> (Case ResQ Club, website, 2016)

The salvation frame aims to direct excess food to be put back into the resource cycle for the sake of the environment (slowing loops). The motivation for the activity stems from ecology rather than resource efficiency. Attention is also paid to the food already produced and the effort to avoid its abandonment to landfills. The visualisation of the frame often presents photos of numerous crops lying on fields and food products in landfills. Salvation also creates value for food waste, as food is seen as worth 'rescuing'. The salvation frame consciously makes the effort to change the viewpoint of considering food waste as disgusting or unwanted but valued and commendable. Hence, when using the frame, the word 'waste' is avoided, and instead, the notion of 'food' is emphasised.

> When a customer comes to pick up the meal, many of them say that they come to rescue the food. It always feels so wonderful to me. They are not coming to pick up the food, but to save it.
>
> (Case ResQ Club, magazine article, 2016)

The goal of Matsmart is to reduce food waste and due to the effort of Finnish customers, over half a million kilos of food were given a

second chance last year. Our clients are true environmental heroes, says the CEO of Matsmart, Karl Andersson.

> (Case Matsmart, magazine article, 2019)

The value propositions using the salvation frame are targeted at consumers who are already environmentally and socially conscious and want to do their part in fixing global sustainability challenges, as well as companies looking for ways to strengthen their corporate social responsibility efforts. Food waste start-ups promise their corporate clients assistance in becoming more responsible. For instance, a food retailer that donates surplus food can communicate this activity to their own customers. Thus, the salvation frame posits that the food waste problem is strongly solvable by individual actors, rather than requiring a change in the food system. It is thus characterised by a rather weak individual-level change. Policymakers and regulations are not seen as the solution to the problem; rather, the initiatives of individuals are highlighted.

4.2. Thrift frame

The second frame is *thrift,* which refers to the thrifty use of limited resources of money, time, effort and raw materials. Thus, when referring to resources in the thrift frame, nature is second to human needs, and natural resources are meant to be used for human purposes, even though we should be thrifty and careful with these resources. Unlike in the salvation frame, where environmental destruction is emphasised if actions are not (now) taken, the central threat tenets in the thrift frame concern the ceasing resources provided by the environment, as well as erosion caused by excess tillage or vanishing water reserves. In particular, the senseless squandering of natural resources is at the forefront of the frame. Consequently, the thrift frame utilises a rationalist appeal and focuses on making the most economical use of resources from scratch so that there will not be excess. The thrift frame views the food waste problem more broadly as inefficiency of the whole food system:

> People tend to think about food waste as something thrown to the bin because the date label has passed, but in reality, waste is caused at each step of food production. Part of the produce is left in the field, some uncommon parts of carcass are left unused from butcheries, fishermen catch rough fish they cannot sell, there is a lot of whey coming as a by-product from making cheese. We live in a system where it 'makes sense' economically not to use all products, says [a cook in the food waste restaurant].
>
> (Case Waste to Taste, news article, 2016)

Hence, the frame focuses on 'narrowing the loops' logic of the

circular economy. In this frame, thriftiness might be directed at environmental costs as well, such as reducing CO_2 emissions, but the motivation for the action stems from resource efficiency rather than directly saving the environment.

In the thrift frame, the value propositions for both consumers and partner companies relate to optimising the use of waste streams that can be transformed into savings or financial advantages. For consumers, the frame often appears to refer to the thrifty use of money. The frame is often visualised using large, colourful fonts denoting discounts and low prices. In some companies, such as Olio and Fiksuruoka.fi, financial advantages are often emphasised. Moreover, getting food for free or at a very low cost is often considered desired by consumers:

Also, I'm a student, so this way I get the free food. So, I can spend £5 a week on my groceries.

(Case Olio, news article, 2018)

This is how you get to buy food for up to 90% cheaper – ketchup for one cent, coffee for half price. (Case Fiksuruoka.fi, news article, 2020)

For partner companies, the focus is shifted to other resources as well, such as effort, raw materials, time and space:

All of the ingredients, work, energy and effort of all the actors in the food supply chain have gone to waste if food is thrown away. Also, the removal of waste from the chain and its handling, are an extra cost for the kitchens. Thus, food waste is like throwing away money.

(Case ResQ Club, magazine article, 2016)

From how they cook to what they don't throw away, these three chefs are working to reduce food waste. #againstwastage #forsavings #dailylunchie

(Case Lunchie, mobile advert, 2017)

For company customers, the thrifty use of money, time and effort is, in many cases, brought up before any environmental benefits on the case companies' websites and related news stories. For example, Leroma lists its service offering's benefits on its web page, mentioning aspects such as '*bound capital is released*', '*storage costs are saved*' and '*disposal costs are eliminated*'. Only the last benefit listed is pointed out as '*extra points for sustainability through the LEROMA-label-sustainability certificate*'. Thus, by saving resources, more can be done with less. The amount of resources that are underutilised is minimised. Thus, it is difficult for consumers to think of reasons not to use the service provided by the food waste start-ups. Thriftiness as a virtue also makes sense from both a business perspective and the perspective of the environment in terms of using (existing) resources as optimally as possible. Consequently, the thrift frame is strongly based on presenting a 'win-win' scenario in which customers, partner companies and other stakeholders, including the environment, are the winning parties. However, in its orientation to change, there is still a rather weak individual-level change portrayed, as no major changes in the food system are considered relevant.

4.3. Innovation frame

The third frame is *innovation*, which concerns innovations and new technologies that drive the ongoing change towards a better future. This frame mobilises action, led by start-ups that question old structures and processes and focus on either slowing or narrowing resource loops. The frame relies on the perception that start-ups offer completely innovative solutions to the market, which aim to solve inefficiencies or problems in the existing food supply chain. The business models of start-ups can create income flows in areas in which there were none before—utilising different waste streams to improve the competitive advantage of a company in the market.

Framed through the innovation frame, the value propositions offer customers the possibility of becoming early adopters in the use of new technologies. Hence, the frame divides consumers and other actors into leaders and followers—leaders being characterised in very positive words as fashionable, bold innovators looking to make their lives and businesses more sustainable. Thus, becoming part of a leader's group is considered an attractive option. In the following quotes, the innovation frame is manifested using the word 'trend' and linking food waste reduction to urban (food) culture, as well as the marginal phenomenon of freeganism as a trendsetter activity:

Fighting food waste has been a growing trend globally for years. Restaurants that offer high quality food waste meals are operating already for instance in Amsterdam and Paris. Those who favour food waste meals and oppose throwing food to the bin also have their own name: freegans.

(Case From Waste to Taste, news article, 2016)

Lunchie fits the urban lifestyle of today. It creates a new kind of food culture which benefits equally consumers and restaurants while at the same time, saving natural resources.

(Case Lunchie, news article, 2016)

For businesses, technologies provide business (development) opportunities to act intelligently and add high-technology solutions to avoid and reduce food waste. As the world is rapidly changing towards increased sustainability demands, this opens new business opportunities for forerunners. The change is also accelerated by the increasing amount of funding available for start-ups that help move the economy from fossil fuel-driven linear models towards a circular economy that utilises resources sustainably. As argued by Lozano (2015), being able to predict future circumstances, the company's reputation and new customer demands are central drivers of sustainable development from the company's viewpoint. In addition, (Aschemann-Witzel et al., 2017) viewed business opportunities as the central success factor of especially for-profit food waste initiatives.

Mentioning specific technologies that are widely discussed in public is another rhetorical tool used by start-ups when applying the innovation frame, highlighting their own expertise as well:

The functionality, the first of its kind within a pantry shopping app, uses AI technology to match recipes to ingredients that users have at home.

(Case CoZzo, online magazine article, 2020)

[…] Leroma's expertise enables a new understanding of who might need and use your surpluses, even if they are beyond food grade.

(Case Leroma, website, 2020)

The innovation frame thus appeals to social distinction by emphasising trendsetter consumers, bold innovators and forerunners in sustainable businesses. The frame is visualised using figures, images and video clips demonstrating digital networks, smart devices and high-tech innovation. In the innovation frame, the food waste business is not seen as a separate entity but as a logical part of the new, more sustainable business models of the circular economy. The vision for the future is very positive—new technologies will improve everyone's lives, and old rigid structures will break. Threats and negative aspects are not part of this frame, which appeals through positive and hopeful future visions. The orientation to change is at a strong system level, as the changes are considered to occur throughout the food system rather than at individual actors' behaviours.

4.4. Normalisation frame

The fourth frame is *normalisation*, which aims at legitimising the food waste business and making it mainstream. According to this frame, the utilisation of food waste should be considered an acceptable and normal part of the existing food supply chain. This frame appeals to customers through social norms. In contrast to the innovation frame, it attempts to

make food waste attractive to the masses to change their misbeliefs and ignorance regarding food waste. This is often achieved by demonstrating—using concrete numbers—how many people or companies are already fighting against food waste through a service provided by a start-up. The normalisation frame is visualised by, for example, photos of food waste used in fancy restaurant meals or by showing that wonky-shaped vegetables are also as valuable as regular-shaped vegetables:

> The motive of normalizing oddly shaped vegetables helps educate the public on something that affects everyone's daily life. Many do not realize that there is nothing wrong with the so-called wonky veggies and that we should not judge by shape or size! Children will also be educated with the oddly shaped veggie and fruit toys, creating a more enlightened generation.
>
> (Case Kromkommer, website, 2021)

When framed through the normalisation frame, the value proposition for the consumers is that food waste businesses provide familiar and comfortable (though novel) food experiences. Partner companies offer opportunities to expand their businesses through new offerings and customer acquisition.

Part of the normalisation frame also removes stigmas attached to people who eat surplus food. As in the case of Olio, one of the co-founders refers to the negative stigma often attached to food waste (and the use of food charities) and how this should be avoided. In the following quote, she emphasises that the utilisation of food waste, similar to using charity when one needs it, should be considered a normal human activity that requires no further explanation:

> One of the number one pieces of feedback we get from people who are in vulnerable situations is that they like that it doesn't feel like a charitable handout. There's no stigma attached to using Olio, and you don't have to justify that you need it.
>
> (Case olio, news article, 2020)

Another case is a food waste store opened by a charity organisation that wants to extend its service to everyone instead of just the underprivileged:

> The WeFood store redirects about 50,000 k of surplus food yearly. Our goal is that our food waste store will become the 'new normal' so we want to reach very ordinary people, continues Hukkanen [the store manager].
>
> (Case WeFood, news, 2018)

For partner companies, the normalisation frame appears simply as an add-on to the companies' existing business models and daily operations. It often emphasises that the new service provided by a start-up is easy to adapt and brings several benefits to the partner company, such as new customer profiles and increased sales. In addition, through the normalisation frame, existing business models are usually never questioned or undervalued. For example, a firm that offers a solution for restaurants to sell excess food from lunch buffets to consumers emphasises the win-win-win situation and the easy adoption of the service to the restaurant's existing operations.

> The problem is finally quite simple. A restaurant always has a few extra meals after lunch time, but no customers. And I have to eat after work at home, but I don't have the energy to cook when I get home. So, I buy the extra meal from the restaurant and eat it at home. Everybody wins in this scenario: me, the restaurant and the Earth.
>
> (Case ResQ Club, news, 2019)

In addition, the normalisation frame often expresses the idea that a multitude of consumers and/or companies are already involved in food waste prevention or reduction with the help of a particular company and its service offerings. The frame thus aims to lower the threshold to start using and becoming a customer of a service. For example, companies often show on their web pages the number of customers they already

have and, hence, persuade others to join.

> There are approximately 40 suppliers, or producers, importers and wholesale firms, and thousands of customers. The CEO of Fiksuruoka, Juhani Järvensivu, 23-years-old student in Aalto University believes that everybody will eventually know Fiksuruoka.
>
> (Case Fiksuruoka.fi, news article, 2017)

> 7700 people already are using ResQ Club to reduce food waste, and at the same time enjoy a restaurant meal at half price. Why wouldn't you do it too?
>
> (Case ResQ Club, documentary data/website, 2021)

The normalisation frame, like the innovation frame, also has a system-level orientation towards change rather than focusing only on individual behaviours. However, it can be considered a weak change, as the structures of the food system are not required to change dramatically; instead, the system will gradually accept food waste reduction as a normal part of its operations. Table 4 summarises the findings.

5. Discussion and conclusions

5.1. Theoretical implications

The findings of this study contribute to two major areas of contemporary B2B marketing research. First, this study contributes to the emerging and rapidly growing food waste literature on B2B marketing by providing new knowledge on how start-ups can facilitate consumers', business actors' and other societal stakeholders' efforts to address the food waste issue. While previous research has highlighted legitimation and normalisation processes (Gollnhofer, 2017b; Gollnhofer et al., 2019; Närvänen et al., 2020) as important ways to address food waste reduction, we expand this literature by illuminating how the sociocultural framing of value propositions can be used to legitimise food waste as a socially accepted and 'normalised' way of doing business in the eyes of multiple stakeholders.

In particular, our findings show how alternative sociocultural frames can be used to problematise the food waste issue from different perspectives and offer solutions that require different changes from individual consumers, firms and the broader market system. For example, the frames of *salvation* and *thrift* tend to position the solutions for food waste largely at an individual actor level and mostly target individual consumers or firms with marketing messages that highlight the costs avoided or the benefits gained by changing their consumption habits or production practices. In contrast, the frames of *innovation* and *normalisation* tend to position food waste solutions largely at a collective level and target broader groups of actors with marketing messages that highlight changes in the whole food supply chain. However, while the normalisation frame aims to integrate food waste into current business models and consumption patterns and, thus, requires few structural changes to the existing system, the innovation frame calls for broader and stronger system-level changes, including legislation, regulation and completely new business models.

In summary, these findings extend previous food waste research in B2B markets by illustrating how value propositions can be used as market-shaping devices to drive the necessary change (Nenonen, Storbacka, Sklyar, Frow, & Payne, 2020) and to help institutionalise novel food waste solutions at multiple levels in broader market systems (Närvänen et al., 2020). The findings also demonstrate that to help fight food waste, creating diverse, more attractive and socioculturally resonant value propositions can be useful to organisations in addition to new technological (Ciulli et al., 2020) or service innovations (Baron, Patterson, Maull, & Warnaby, 2018) or business models (Mattila et al., 2019), which have previously been identified in the literature.

Second, this study contributes to the value proposition literature (e. g. Payne et al., 2017, 2020) by demonstrating how food waste start-ups use sociocultural frames to communicate their value propositions. While

previous value proposition research in B2B markets has focused almost exclusively on economic framing and monetary value quantification (e. g. Anderson et al., 2006; Patala et al., 2016; Wouters & Kirchberger, 2015), we expand this literature by showing how non-economic and sociocultural frames can be used to communicate value propositions. This responds to previous calls to provide newer tools to communicate value propositions to wider societal stakeholders (Corvellec & Hultman, 2014; Ranta et al., 2020), and is particularly important in contemporary B2B markets, where firms are increasingly expected to go beyond economic and business benefits and demonstrate how they deliver societal benefits to all stakeholders and the broader society (Keränen, 2017; Kotler, 2011).

Furthermore, we describe how specific sociocultural frames (salvation, thrift, innovation and normalisation) leverage different discourses and narratives to problematise food waste and appeal to different stakeholders and value drivers. This goes well beyond the value quantification approach, which dominates the current value proposition literature (Table 2) and provides a new understanding of the broader linguistic means, as well as specific rhetorical strategies that firms can use to communicate their value propositions. In particular, these findings extend previous empirical research on alternative value proposition communication tactics that firms can use to increase the mainstream appeal of disruptive solutions compared to incumbent technologies (Bohnsack & Pinkse, 2017; Ranta et al., 2020).

5.2. Managerial implications

From a managerial perspective, this study offers several important insights into developing and framing value propositions, both in the food waste industry specifically and in the broader market generally. First, the findings provide managers with concrete guidelines and templates for developing and communicating value propositions in the food waste business. For example, the four identified sociocultural frames illustrate alternative approaches that managers can use to highlight different marketing arguments, target different stakeholders and appeal to different value drivers. In addition, the frame structure highlights the key rhetorical and/or narrative elements that managers can use when they want to invoke, harness or leverage specific sociocultural frames.

Second, any actors involved in the food waste business can use the identified sociocultural framing approaches to problematise food waste issues and make them salient to wider stakeholder groups. Problematising food waste issues helps to justify the existence and clarify the mission and purpose of food waste businesses, which in turn helps managers and other stakeholders to legitimise, shape and potentially grow the business opportunities for food waste solutions. Situations in which everybody gets benefits (win-win) are particularly fruitful for problematising food waste issues and expanding related business opportunities.

Third, the framing approach offers managers rhetorical tools that can be used to highlight, communicate and convey value propositions that would otherwise be difficult to quantify. This is particularly critical for firms whose competitive advantage is mostly based on non-economic benefits, such as firms in the food waste and cleantech industries or in the social purpose and non-profit domains. For firms and managers that find quantifying their value propositions difficult, the framing approach offers tools to make their value arguments more salient and appeal to target audiences through emotional, ideological or moral value drivers or social norms and distinction.

5.3. Limitations and avenues for future research

While this study offers important insights into the framing of value propositions in the food waste industry, it has natural limitations that provide directions for future research. First, our inquiry focuses on the framing approaches of start-up firms in a specific context: the emerging food waste business. Given that the perceived value is context-specific, a natural extension would be to explore potential framing approaches in other industries. For example, businesses with alternative raw materials, such as insect-based or genetically manipulated foods; questionable legitimacy, such as gambling or tobacco, or socially stigmatised and/or vulnerable customers, such as mental health, alcoholics or artificial fertilisation clinics, can offer particularly interesting and insightful contexts. In addition, while we focus on start-ups, future research can complement our findings by examining how more established or incumbent actors either in the food waste or other industries utilise framing approaches.

Second, while this study identifies four alternative frames used in the food waste industry, it does not reveal how well alternative frames resonate with different stakeholders. Thus, a very interesting and highly relevant avenue for future research would be to empirically examine how, when and under what conditions specific frames appeal to different decision makers and stakeholders. For example, a fuzzy-set qualitative comparative analysis can be used to reveal the different conditions under which specific frames are influential, or field experiments can be used to test the impact of specific frames on customers' willingness to invest in or engage with specific food waste solutions (e.g. Salonen, Zimmer, & Keränen, 2021).

Third, while we explore the framing approaches across multiple firms in the food waste industry, our analysis provides a relatively static and firm-centric view of the frame application. Future studies can examine how multiple actors contribute to (co-)creating, maintaining and disrupting different frames and how and why specific frames evolve or change dynamically over time.

Finally, we illuminate the communicative aspects of value propositions that are closely related to sociocultural framing processes and emphasise the need to carefully consider communication in the creation of value propositions. We hope that our paper provides value to future research building on this alternative approach to value propositions and, in particular, how businesses can drive the change towards a more sustainable and circular economy.

Acknowledgements

References

Anderson, J. C., Narus, J. A., & Van Rossum, W. (2006). Customer value propositions in business markets. *Harvard Business Review, 84*(3), 90–100.

Aschemann-Witzel, J., De Hooge, I., & Normann, A. (2016). Consumer-related food waste: Role of food marketing and retailers and potential for action. *Journal of International Food & Agribusiness Marketing, 28*(3), 271–285.

Aschemann-Witzel, J., de Hooge, I. E., & Almli, V. L. (2020). My style, my food, my waste! Consumer food waste-related lifestyle segments. *Journal of Retailing and Consumer Services, 59*, Article 102353. https://doi.org/10.1016/j.jretconser.2020.102353

Aschemann-Witzel, J., de Hooge, I. E., Almli, V. L., & Oostindjer, M. (2018). Fine-tuning the fight against food waste. *Journal of Macromarketing, 38*(2), 168–184.

Aschemann-Witzel, Jessica, De Hooge, Ilona, Rohm, Harald, Normann, Anne, Bonzanini Bossle, Marilia, Gronhoj, Alice, & Oostindjer, Marije (2017). Key characteristics and success factors of supply chain initiatives tackling consumer-related food waste – A multiple case study. *Journal of Cleaner Production, 155*, 33–45. https://doi.org/10.1016/j.jclepro.2016.11.173

Baron, S., Patterson, A., Maull, R., & Warnaby, G. (2018). Feed people first: A service ecosystem perspective on innovative food waste reduction. *Journal of Service Research, 21*(1), 135–150.

Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. *Annual Review of Sociology, 26*(1), 611–639.

Bhatt, S., Lee, J., Deutsch, J., Ayaz, H., Fulton, B., & Suri, R. (2018). From food waste to value-added surplus products (VASP): Consumer acceptance of a novel food product category. *Journal of Consumer Behaviour, 17*(1), 57–63.

Bhattacharya, A., & Fayezi, S. (2021). Ameliorating food loss and waste in the supply chain through multi-stakeholder collaboration. *Industrial Marketing Management, 93*, 328–343.

Block, L. G., Keller, P. A., Vallen, B., Williamson, S., Birau, M. M., Grinstein, A., … Tangari, A. H. (2016). The squander sequence: Understanding food waste at each stage of the consumer decision-making process. *Journal of Public Policy & Marketing, 35*(2), 292–304.

Bohnsack, R., & Pinkse, J. (2017). Value propositions for disruptive technologies: Reconfiguration tactics in the case of electric vehicles. *California Management Review, 59*(4), 79–96.

Borrello, M., Caracciolo, F., Lombardi, A., Pascucci, S., & Cembalo, L. (2017). Consumers' perspective on circular economy strategy for reducing food waste. *Sustainability, 9*(1), 141.

Cicatiello, C., Franco, S., Pancino, B., & Blasi, E. (2016). The value of food waste: An exploratory study on retailing. *Journal of Retailing and Consumer Services, 30*, 96–104.

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.

Cooremans, K., & Geuens, M. (2019). Same but different: Using anthropomorphism in the battle against food waste. *Journal of Public Policy & Marketing, 38*(2), 232–245.

Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory.* Los Angeles: Sage.

Corvellec, H., & Hultman, J. (2014). Managing the politics of value propositions. *Marketing Theory, 14*(4), 355–375.

Coviello, N. E., & Joseph, R. M. (2012). Creating major innovations with customers: Insights from small and young technology firms. *Journal of Marketing, 76*(6), 87–104.

Creed, W. D., Langstraat, J. A., & Scully, M. A. (2002). A picture of the frame: Frame analysis as technique and as politics. *Organizational Research Methods, 5*(1), 34–55.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches.* London: Sage.

Dewulf, A., Gray, B., Putnam, L., Lewicki, R., Aarts, N., Bouwen, R., & Van Woerkum, C. (2009). Disentangling approaches to framing in conflict and negotiation research: A meta-paradigmatic perspective. *Human Relations, 62*(2), 155–193.

Dora, M., Biswas, S., Choudhary, S., Nayak, R., & Irani, Z. (2021). A system-wide interdisciplinary conceptual framework for food loss and waste mitigation strategies in the supply chain. *Industrial Marketing Management, 93*, 492–508.

Emerson, J. (2003). The blended value proposition: Integrating social and financial returns. *California Management Review, 45*(4), 35–51.

Entman, R. M. (1991). Framing U.S coverage of international news: Contrasts in narratives of the KAL and Iran Air incidents. *Journal of Communication, 41*, 6–27. https://doi.org/10.1111/j.1460-2466.1991.tb02328.x

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication, 43*(4), 51–58.

European Commission. (2021). EU Platform on food losses and food waste. Available at: https://ec.europa.eu/food/safety/food_waste/eu_actions/eu-platform_en (accessed June 4, 2021).

Fairhurst, G., & Sarr, R. (1996). *The art of framing.* San Francisco: Jossey-Bass.

Frow, P., McColl-Kennedy, J. R., Hilton, T., Davidson, A., Payne, A., & Brozovic, D. (2014). Value propositions: A service ecosystems perspective. *Marketing Theory, 14*(3), 327–351.

Giménez, A., Aschemann-Witzel, J., & Ares, G. (2021). Exploring barriers to consuming suboptimal foods: A consumer perspective. *Food Research International, 141*, Article 110106. https://doi.org/10.1016/j.foodres.2021.110106

Goffman, E. (1974). *Frame analysis: An essay on the organization of experience.* Cambridge, Mass: Harvard University Press.

Gollnhofer, J. F. (2017a). The legitimation of a sustainable practice through dialectical adaptation in the marketplace. *Journal of Public Policy & Marketing, 36*(1), 156–168.

Gollnhofer, J. F. (2017b). Normalising alternative practices: The recovery, distribution and consumption of food waste. *Journal of Marketing Management, 33*(7–8), 624–643.

Gollnhofer, J. F., Weijo, H. A., & Schouten, J. W. (2019). Consumer movements and value regimes: Fighting food waste in Germany by building alternative object pathways. *Journal of Consumer Research, 46*(3), 460–482.

Grewal, L., Hmurovic, J., Lamberton, C., & Reczek, W. R. (2019). The self-perception connection: Why consumers devalue unattractive produce. *Journal of Marketing, 83*(1), 89–107.

Gruber, V., Holweg, C., & Teller, C. (2016). What a waste! Exploring the human reality of food waste from the store manager's perspective. *Journal of Public Policy & Marketing, 35*(1), 3–25.

Harvey, J., Smith, A., Goulding, J., & Illodo, I. B. (2020). Food sharing, redistribution, and waste reduction via mobile applications: A social network analysis. *Industrial Marketing Management, 88*, 437–448.

Hebrok, M., & Boks, C. (2017). Household food waste: Drivers and potential intervention points for design–an extensive review. *Journal of Cleaner Production, 151*, 380–392.

Hinterhuber, A. (2017). Value quantification capabilities in industrial markets. *Journal of Business Research, 76*, 163–178.

Humphreys, A. (2010). Megamarketing: The creation of markets as a social process. *Journal of Marketing, 74*(2), 1–19.

Humphreys, A., & Latour, K. A. (2013). Framing the game: Assessing the impact of cultural representations on consumer perceptions of legitimacy. *Journal of Consumer Research, 40*(4), 773–795.

Järvensivu, T., & Törnroos, J.Å. (2010). Case study research with moderate constructionism: Conceptualization and practical illustration. *Industrial Marketing Management, 39*(1), 100–108.

Karababa, E., & Kjeldgaard, D. (2014). Value in marketing: Toward sociocultural perspectives. *Marketing Theory, 14*(1), 119–127.

Keränen, J. (2017). Towards a broader value discourse: Understanding sustainable and public value potential. *Journal of Creating Value, 3*(2), 193–199.

Keränen, J., Terho, H., & Saurama, A. (2021). Three ways to sell value in B2B markets. *MIT Sloan Management Review, 63*(1), 64–70.

Kotler, P. (2011). Reinventing marketing to manage the environmental imperative. *Journal of Marketing, 75*(4), 132–135.

Lehtokunnas, T., Mattila, M., Närvänen, E., & Mesiranta, N. (2020). Towards a circular economy in food consumption: Food waste reduction practices as ethical work.

Journal of Consumer Culture. https://doi.org/10.1177/1469540520926252 (OnlineFirst).

Loebnitz, N., Schuitema, G., & Grunert, K. G. (2015). Who buys oddly shaped food and why? Impacts of food shape abnormality and organic labeling on purchase intentions. *Psychology & Marketing, 32*(4), 408–421.

Lozano, R. (2015). A holistic perspective on corporate sustainability drivers. *Corporate Social Responsibility and Environmental Management, 22*(1), 32–44.

Makhal, A., Robertson, K., Thyne, M., & Mirosa, M. (2020). Normalising the 'ugly' to reduce food waste: Exploring the socialisations that form appearance preferences for fresh fruits and vegetables. *Journal of Consumer Behaviour.* https://doi.org/10.1002/cb.1908 (Early View).

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*(4–5), 249–265.

Mattila, M., Mesiranta, N., Närvänen, E., Koskinen, O., & Sutinen, U. M. (2019). Dances with potential food waste: Organising temporality in food waste reduction practices. *Time & Society, 28*(4), 1619–1644.

Mesiranta, N., Närvänen, E., & Mattila, M. (2021). Framings of food waste: How food system stakeholders are responsibilized in public policy debate. *Journal of Public Policy & Marketing.* https://doi.org/10.1177/07439156211005722

Moisander, J., & Valtonen, A. (2006). *Qualitative marketing research: A cultural approach.* London: Sage.

Mullick, S., Raassens, N., Haans, H., & Nijssen, E. J. (2020). Reducing food waste through digital platforms: A quantification of cross-side network effects. *Industrial Marketing Management, 93*, 533–544.

Närvänen, E., Mattila, M., & Mesiranta, N. (2021). Institutional work in food waste reduction: Start-ups' role in moving towards a circular economy. *Industrial Marketing Management, 93*, 605–616.

Närvänen, E., Mesiranta, N., Mattila, M., & Heikkinen, A. (2020). *Food waste management: Solving the wicked problem.* Cham, Switzerland: Palgrave Macmillan.

Nenonen, S., Storbacka, K., Sklyar, A., Frow, P., & Payne, A. (2020). Value propositions as market-shaping devices: A qualitative comparative analysis. *Industrial Marketing Management, 87*, 276–290.

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.

Parfitt, J., Barthel, M., & Macnaughton, S. (2010). Food waste within food supply chains: Quantification and potential for change to 2050. *Philosophical Transactions of the Royal Society, B: Biological Sciences, 365*(1554), 3065–3081.

Patala, S., Jalkala, A., Keränen, J., Väisänen, S., Tuominen, V., & Soukka, R. (2016). Sustainable value propositions: Framework and implications for technology suppliers. *Industrial Marketing Management, 59*, 144–156.

Patton, M. Q. (2015). *Qualitative research and evaluation methods.* Thousand Oaks, CA: Sage.

Payne, A., & Frow, P. (2014a). Developing superior value propositions: A strategic marketing imperative. *Journal of Service Management, 25*(2), 213–227.

Payne, A., & Frow, P. (2014b). Deconstructing the value proposition of an innovation exemplar. *European Journal of Marketing, 48*(1/2), 237–270.

Payne, A., Frow, P., & Eggert, A. (2017). The customer value proposition: Evolution, development, and application in marketing. *Journal of the Academy of Marketing Science, 45*(4), 467–489.

Payne, A., Frow, P., Steinhoff, L., & Eggert, A. (2020). Toward a comprehensive framework of value proposition development: From strategy to implementation. *Industrial Marketing Management, 87*, 244–255.

Pearson, D., & Perera, A. (2018). Reducing food waste: A practitioner guide identifying requirements for an integrated social marketing communication campaign. *Social Marketing Quarterly, 24*(1), 45–57.

Porpino, G. (2016). Household food waste behavior: Avenues for future research. *Journal of the Association for Consumer Research, 1*(1), 41–51.

Principato, L., Mattia, G., Di Leo, A., & Pratesi, C. A. (2021). The household wasteful behaviour framework: A systematic review of consumer food waste. *Industrial Marketing Management, 93*, 641–649.

Quested, T. E., Marsh, E., Stunell, D., & Parry, A. D. (2013). Spaghetti soup: The complex world of food waste behaviours. *Resources, Conservation and Recycling, 79*, 43–51.

Ranta, V., Keränen, J., & Aarikka-Stenroos, L. (2020). How B2B suppliers articulate customer value propositions in the circular economy: Four innovation-driven value creation logics. *Industrial Marketing Management, 87*, 291–305.

Rintamäki, T., Kuusela, H., & Mitronen, L. (2007). Identifying competitive customer value propositions in retailing. *Managing Service Quality, 16*(6), 621–634.

Ross, L., & Nisbett, R. E. (1991). *The person and the situation: Perspectives in social psychology.* New York: McGraw-Hill.

Sakyi-Gyinae, K., & Holmlund, M. (2018). What do business customers value? An empirical study of value propositions in a servitization context. *Technology Innovation Management Review, 8*(5), 36–43.

Saldaña, J. (2021). *The coding manual for qualitative researchers.* Los Angeles: Sage.

Salonen, A., Zimmer, M., & Keränen, J. (2021). Theory development in servitization through the application of fsQCA and experiments. *International Journal of Operations & Production Management.* https://doi.org/10.1108/IJOPM-08-2020-0537 (In press).

Sirola, N., Sutinen, U. M., Närvänen, E., Mesiranta, N., & Mattila, M. (2019). Mottainai!—A practice theoretical analysis of Japanese consumers' food waste reduction. *Sustainability, 11*(23), 6645.

Snihur, Y., Thomas, L. D., & Burgelman, R. A. (2018). The performative power of words: How business model innovators use framing for strategic advantage. In K. J. Sund, R. J. Galavan, & S. Brusoni (Eds.), *Cognition and innovation (new horizons in managerial and organizational cognition, 3rd ed.)* (pp. 13–44). Bingley, UK: Emerald Publishing Limited.

Sutinen, U. M., & Närvänen, E. (2021). Constructing the food waste issue on social media: A discursive social marketing approach. *Journal of Marketing Management.* https://doi.org/10.1080/0267257X.2021.1966077

Talwar, S., Kaur, P., Yadav, R., Bilgihan, A., & Dhir, A. (2021). What drives diners' eco-friendly behaviour? The moderating role of planning routine. *Journal of Retailing and Consumer Services, 63*, Article 102678.

Terho, H., Haas, A., Eggert, A., & Ulaga, W. (2012). 'It's almost like taking the sales out of selling'—Towards a conceptualization of value-based selling in business markets. *Industrial Marketing Management, 41*(1), 174–185.

UNEP. (2021). Food waste index report 2021. Available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/35280/FoodWaste.pdf (accessed June 21, 2021).

United Nations. (2021). Goal 12: Ensure sustainable consumption and production patterns. Available at: http://www.un.org/sustainabledevelopment/sustainable-consumption-production/ (accessed June 4, 2021).

Vygotsky, L. S. (1986). *Thought and language* (A. Kozulin, Ed., Trans.). Cambridge, MA: MIT Press.

Wouters, M., Anderson, J. C., & Kirchberger, M. (2018). New-technology startups seeking pilot customers: Crafting a pair of value propositions. *California Management Review, 60*(4), 101–124.

Wouters, M., & Kirchberger, M. A. (2015). Customer value propositions as interorganizational management accounting to support customer collaboration. *Industrial Marketing Management, 46*, 54–67.

Yrjölä, M., Saarijärvi, H., & Nummela, H. (2018). The value propositions of multi-, cross-, and omni-channel retailing. *International Journal of Retail & Distribution Management, 46*(11−12), 1133–1152.