Norwegian University of Life Sciences
School of Economics and Business

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Moving towards sustainability: business models and entrepreneurship in the Norwegian wool industry

På sporet av bærekraft: forretningsmodeller og entreprenørskap i norsk ullindustri

Viktorija Vičiūnaitė

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Acknowledgements

When writing the acknowledgements for a Ph.D. thesis one faces what is known as The Great Dilemma. Do I just list a few key names, or do I go all in? Many choose the former, for a variety of reasons; I chose the latter. So sit back, because it can quickly become a couple of pages.

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Contents

List of papers

The thesis contains the following papers:

1. **Informing sustainable business models with a consumer preference perspective**

   Authors: Viktorija Viciunaite and Frode Alfnes

   Published in the *Journal of Cleaner Production*

2. **Translating sustainable business models to consumers**

   Author: Viktorija Viciunaite

   Submitted to *Organization & Environment*

3. **Localizing opportunities and industries in networks: a study of micro-entrepreneurs' embedded learning practices**

   Authors: Elin Kubberød, Viktorija Viciunaite and Siw M. Fosstenløkken

   Under review at the *International Small Business Journal*

4. **The role of effectual networking in small business marketing**

   Authors: Elin Kubberød, Viktorija Viciunaite and Siw M. Fosstenløkken

   Published in the *Journal of Small Business and Enterprise Development*

Summary

This thesis is part of the research project "KRUS – enhancing local wool value chains in Norway", focusing on the role of Norwegian wool in a move towards more sustainability in fashion and textiles. The thesis contributes to the literature on sustainable business models and entrepreneurship with four empirical papers contextualized in the Norwegian wool industry. The scope of sustainability issues in textiles span the whole value chain and life cycle. Likewise, addressing these issues requires a holistic approach, which is one of the main reasons the thesis focuses on several elements of the value chain.

Papers 1 and 2 focus on the firm-consumer interface. Paper 1 investigates consumer preferences for sustainable business model elements through a discrete choice experiment of 394 active knitters in Norway. We find that consumers are primarily interested in conventional attributes, yet some pro-environmental attributes also ranked consistently high, irrespective of the presence of consumer's pro-environmental motives otherwise. We suggest that sustainability-oriented firms aiming to capture the value of their sustainability efforts, should leverage the information about consumer preferences for sustainable business model elements in their work with the business model element trio of customer segments, value proposition, and channels.

Paper 2 focuses on how firms communicate their business model sustainability efforts to consumers. Thematic analysis of yarn firm's webpages, newsletters and social media profiles revealed that firms did not use business model terminology when communicating their sustainability efforts. This supports the paper's suggestion that firms indeed translated their sustainability efforts. The efforts were framed as product attributes or consequences to consumers, society or the environment. Data analysis also revealed that firms with a strong sustainability or localism focus translated not only their business model sustainability efforts, but also the business model logic – their sustainability or localism goals.

Paper 3 marks the shift from the firm-consumer interface to the firm in its business-to-business context. It explores the role of local embeddedness in relational entrepreneurial learning among sustainability-oriented micro-entrepreneurs. A combined thematic analysis and Gioia methodology revealed that the entrepreneurs shared emotional local embeddedness, which led them to seek out localized knowledge and, eventually, develop a community of practice. The shared emotional embeddedness

and increasing cooperation within their community of practice laid the foundation for a means-driven co-creation in opportunity recognition. However, the entrepreneurs varied in the extent they leveraged their local embedding for their benefits. A few engaged in bridging activities where they moved the locally embedded knowledge from the local small business context to the dominant large-scale industry context, thereby helping the smaller actors increase their legitimacy and making them more attractive as potential collaborators.

Paper 4 continues to explore the firm in its business-to-business relations and helps extend the findings of paper 2. It investigates how marketing practices play out in the small business context. The study demonstrates that market uncertainty can be reduced through effectual networking. We propose a new model of the Entrepreneurial Marketing Mix under uncertainty, emphasizing the role of the owner-manager (Person) and their Purpose as the outset and driving force of the marketing process. We argue, that in early and uncertain phases, relying on the Person with a clear Purpose might be a good starting point in exploring new markets.

Sammendrag

Denne avhandlingen er en del av forskningsprosjektet «KRUS – Grønn vekst i hvitt gull gjennom lokalt forankrede verdikjeder», som utforsker rollen til norsk ull i veien mot mer bærekraft i mote- og tekstilindustrien. Avhandlingen bidrar til litteraturen om bærekraftige forretningsmodeller og entreprenørskap gjennom fire empiriske artikler som er kontekstualisert innen norsk ullindustri. Omfanget av bærekraftsutfordringer i tekstilindustrien spenner over hele verdikjeden og livssyklusen. Å takle disse utfordringene krever en helhetlig tilnærming, og denne avhandlingen fokuserer på flere elementer i verdikjeden.

Artikler 1 og 2 fokuserer på forholdet mellom bedrift og forbruker. Artikkel 1 undersøker forbrukernes preferanser for bærekraftige forretningsmodellselementer gjennom et valgeksperiment med 394 aktive strikkere i Norge. Resultatene viser at forbrukere først og fremst er interessert i konvensjonelle egenskaper, men noen miljøvennlige egenskaper er rangerte gjennomgående høyt, uavhengig av strikkernes generelle miljømotivasjon for å strikke. Vi konkluderer med at bærekraftsorienterte bedrifter som vil høste verdien av sin bærekraftinnsats, bør bruke informasjonen om forbrukerpreferanser for bærekraftige forretningsmodellelementer i sitt arbeid med forretningsmodellelementtrioen kundesegmenter, verdiforslag og kanaler.

Artikkel 2 fokuserer på hvordan bedrifter kommuniserer sin bærekraftsinnsats til forbrukere. Tematisk analyse av garnbedrifters nettsider, nyhetsbrev og sosial-media profiler viser at bedrifter ikke bruker forretningsmodellsterminologi når de kommuniserer sin bærekraftsinnsats. Bedriftene presenterer sin innsatsen som produktegenskaper eller konsekvenser for forbrukere, samfunn eller miljø. Dataanalysen avdekket også at firmaer med sterkt bærekraft- eller lokalismefokus oversetter ikke bare bærekraftsinnsatsen, men også forretningsmodellslogikken.

Fra artikkel 3 fokuserer avhandlingen på bedrifter i relasjon med andre forretningsaktører. Artikkel 3 utforsker rollen til lokal forankring i relasjonell entreprenøriell læring. Vi kombinerer tematisk analyse og Gioia-metodikk i en casestudie som viser at gründerne deler emosjonell lokal forankring, noe som har ført til at de har oppsøkt lokal kunnskap og utviklet et praksisfellesskap. Dette har lagt grunnlaget for en middelstyrt samskaping i å gjenkjenne muligheter. Gründerne varierte imidlertid i hvilken grad de utnyttet sin lokale forankring til egen fordel. Noen få engasjerte seg i

aktiviteter der de overførte den lokalt forankrede kunnskapen fra den lokale småbedriftskonteksten til en storskala industrikontekst. Dette var noe som hjalp de mindre aktørene å øke legitimiteten og gjøre dem mer attraktive som potensielle samarbeidspartnere.

Artikkel 4 er en casestudie som utforsker en bedrifts forretningsrelasjoner og bidrar til å belyse funnene i artikkel 2. Artikkelen undersøker markedsføringspraksisen i en småbedriftssammenheng. Studien viser at markedsusikkerhet kan reduseres gjennom effektuell nettverking. Vi foreslår en ny entreprenøriell markedsføringsmiks under usikkerhet, og understreker rollen til eier-leder (Person) og deres målsetninger som utgangspunkt og drivkraft i markedsføringsprosessen. Vi foreslår videre at i tidlige og usikre faser kan det å stole på personen med en klar målsetning være et godt utgangspunkt for å utforske nye markeder.

Introduction

1. Background and context

This thesis is part of the research project "KRUS – enhancing local wool value chains in Norway", focusing on the role of Norwegian wool and production "in a move towards a goal of sustainability in the fashion and textile sector" (Klepp et al., 2019). The thesis contributes to the literature on sustainable business models and entrepreneurship with four empirical papers contextualized in the Norwegian wool industry.

This introductory chapter starts by contextualizing the thesis. It provides an outline of the current debates regarding sustainability in the textile industry, positioning wool and Norwegian wool in that debate. This is followed by a short presentation of the Norwegian wool industry, the KRUS project and how they fit in the larger sustainability of textiles debate. The first section ends with presenting the objectives of the thesis and introducing the papers that constitute it. Further in the chapter follows an overview of and argumentation for the theoretical and methodological approaches used in the thesis, as well as a short summary of each paper and concluding remarks are provided.

1.1. Sustainability and the textile industry

The international textile industry creates enormous negative environmental effects spread across the value chain, as well as geographically and temporally. Its environmental impacts span such issues as greenhouse gas emissions, resource (water, land) depletion, pollution and land degradation to name a few (Caniato et al., 2012; Chrobot et al., 2018; de Brito et al., 2008; Pal & Gander, 2018; Šajn, 2019). A recent report (Chrobot et al., 2018) revealed that that apparel and footwear production account for an estimated 8.1% of global climate impacts. This estimate does not include the use stage, reportedly having the largest environmental footprint in a garments life cycle (Almut et al., 2014). Apparel and footwear consumption has the 4th highest environmental footprint after food, housing and transport in the European Union (EU) (Almut et al., 2014) and accounts for 2-10% of EU consumption's environmental impacts (Šajn, 2019).

Assessing the environmental impacts of textiles has proven to be a challenging task. Until recently, tools for assessing the environmental impacts of fibres and textiles,

(such as the Higg index) only focused on the stages from cradle to gate[1], omitting later stages of the life cycle of a garment. Recently, the debate around measuring sustainability in textiles started also focusing on the use (Henry et al., 2019; Laitala et al., 2018) and disposal (Laitala, 2014; Sandin & Peters, 2018) stages. Almut et al. (2014) in their report indicated the use phase having the largest environmental footprint due to water, energy and chemical (detergent) consumption in laundering, tumble drying and ironing. Furthermore, use and laundering of garments from synthetic fibres contributes to the accumulation of microfibers in the environment (Henry et al., 2019) which can have potential negative consequences for the environment and end up in the human food chain (Šajn, 2019).

Textile waste in all stages of the life cycle of a garment is also an issue. In Norway, the largest part (42%) of all textile waste comes from households. The amount of textile waste from private households has increased by 80% in the period 1995-2010 (Klepp & Laitala, 2016). Every fifth garment is never used or used just a couple of times by the current owner (Klepp & Laitala, 2016). Handling textile waste is problematic and there are currently few solutions for recycling, especially for mixed fibre garments (Šajn, 2019). Circular business models (BMs) receive increasing attention (Geissdoerfer et al., 2018) as a potential solution, but this approach omits the discussion about reducing levels of consumption and production, which is another path to more sustainability in textiles (Almut et al., 2014). Indeed, environmental benefits are higher with reuse than recycling, because it avoids production (Sandin & Peters, 2018).

On the social side, the main sustainability issues relate to outsourcing of production to low-wage countries like the Far East. Outsourcing has some positive effects too, especially when it comes to economic development. It employs around one third of manufacturing workers in relatively poor key Asian production countries (Eder-Hansen et al., 2017). It is an important provider of employment for women, who make up around 68% of the garment workforce (Lehmann et al., 2018). It is also a driver for economic growth in the key Asian production countries (Eder-Hansen et al., 2017).

However, the outsourcing to low-wage countries also raises numerous social issues. The Pulse of the Fashion Industry report indicates that in countries like India, non-compliance to minimum wages can be as much as 51% (Eder-Hansen et al., 2017). This

[1] It takes into account stages from raw material production to the finished material that can be assembled into a product.

is in addition to the minimum wages in the industry being around half of what can be considered a living wage. Women are particularly vulnerable in this scenario, being more likely to receive lower wages than men for the same work and more likely to receive below minimum wage than men. The industry is also known to use other vulnerable groups, such as child labour. Furthermore, workers risk exposure to unsafe working conditions, such as fires or hazardous chemicals. While there is considerable media attention and increasing consumer awareness around social issues in the garment industry, improvements are slow (Lehmann et al., 2019).

1.2. Norwegian wool in the global wool sustainability debate

Wool is a fibre from hairy mammals. The term wool is usually used for sheep hair, while other animal hair is often specified by the animal it is acquired from (Rex et al., 2019), such as alpaca wool or angora wool. Sheep wool makes up around 82% of global annual animal fibre production (Rex et al., 2019), yet its share of global textile fibre consumption is quite small (1.2% in 2014 (Wilcox, 2015)). Norway produces just over four thousand tons of wool a year (Klepp & Tobiasson, 2017), making the Norwegian wool industry small in the global context. In contrast, Australia produced 340 thousand tons in 2017 (AgriFutures Australia, 2019). However, wool has figured prominently in the debate surrounding the sustainability of textiles both globally and in Norway.

The debate around wool and sustainability is complex. Wool is a natural, renewable and biodegradable material. Furthermore, sheep can 'transform' atmospheric CO^2 into wool through grazing on grass and plants that capture CO^2 from the atmosphere via photosynthesis. 40% of the weight of clean wool is biogenic carbon (Swan, 2019). However, up to recently, wool has performed poorly in most international life cycle assessment tools measuring textile fibre performance in the cradle-to-gate stages, such as the Higg Material Sustainability Index. Wool ranks 6th from the bottom out of 22 materials tested, performing just a bit better than cotton, but almost twice as bad as polyester. The main reasons why wool has ranked so poorly in these indexes is its global warming potential. Sheep are ruminates and emit an estimated 30 litres[2] of methane per animal on a daily basis (Greenhouse gas online). Around 75% of wools climate impact is due to these emissions (Sandin et al., 2019).

[2] The equivalent estimate for a dairy cow is around 200 litres per animal daily.

A recent report (Sandin et al., 2019) revealed that there is big variation across studies of wool's environmental impacts in the production stage. Its reported climate emissions ranged from 1.7 to 36.2 kg CO^2 equivalent[3], while reported water use varied from 37 to 1210 litres per kg wool. Complicating matters further, in many countries including Norway, sheep are kept primarily for meat and the allocation of environmental impacts between meat, wool and other bi-products affects wool's environmental performance (ibid.).

Wool has many benefits in the use and disposal stages compared with other textile fibres. These stages are typically not included in most life cycle assessments. Wool garments tend to be washed more gently, less frequently, in lower temperatures and not be tumble dried (Laitala et al., 2017). This is an important aspect given that the laundering and drying processes in a garments use phase account for its largest environmental footprint (Almut et al., 2014). Wool also has a variety of attractive use features that contribute to easier maintenance. It repels dirt (IWTO, 2019b) and odour (Rex et al., 2019); it is also naturally flame resistant (IWTO, 2019c). Norwegian wool specifically is known for its durability, lustre and crimp (Klepp et al., 2019).

Wool garments also tend to have longer than average life spans[4] (Laitala et al., 2017) which is another important sustainability aspect, given the environmental issues related to textile waste (Sandin & Peters, 2018). Wool products have "the potential for two or more uses or 'lives' and a total 'active life' of 20-30 years" (IWTO, 2019a). In addition, because wool is a natural material, it would not shed synthetic microfibres in use or end-of-life, provided it did not receive treatment with synthetic materials (e.g. superwash).

Other aspects of sustainability that comes up when discussing wool are animal welfare, pesticide use, and biodiversity. Animal welfare activists have criticised the shearing processes (PETA) and mulesing (the removal of skin around the breech to avoid parasites) (PETA) in places like Australia. In Norway, on the other hand, there has not been reported serious shearing mistreatments and mulesing is not used. Hence, animal welfare is often included among the positive aspects when comparing Norwegian wool with international producers.

[3] Not counting CO2 sequestered in fibre.

[4] Wool is more common to use in certain types of garments, such as outer coats or sweaters, which have different use patterns than e.g. a basic T-shirt, although in countries like Norway wool is increasingly popular in summer garments like T-shirts as well. Nonetheless, the life-span finding should be interpreted with caution.

Pesticide use is also quite low in Norway. In fact, 75% of Norwegian wool has the official Nordic ecolabel – The Swan, because the detergents used are easily degradable and not poisonous to life in water and the wool is 'chemically' very clean (The Swan, 2015). Overgrazing is generally not a problem in Norway (Ross et al., 2016) either. The overall number of animals is quite low – around 1 million winter fed sheep in 2019 (Dyrevernalliansen, 2019). The average size of a sheep farm is quite small – around 64 animals per farm in 2016 (Klepp & Tobiasson, 2017). Rather than a problem, sheep are seen as important actors in maintaining cultural landscapes.

When it comes to biodiversity, on the one hand, sheep grazing in Norway is said to contribute to it positively through allowing a richer variety of plants and insects to thrive in grazing areas, although this claim is somewhat disputed (Håpnes, 2010). On the other hand, in Norway, sheep farming is a direct threat to the survival of its main predators – wolf, bear, lynx, wolverine and eagle. Norway's predator management policy is a heated and polarized debate. Opponents accuse it to be in conflict with the country's own biodiversity law as well as the Bern convention (Naturnvernforbundet, 2019), while proponents argue for an even stricter approach. Since sheep are mainly kept for meat in Norway, the predator debate has cantered more around meat products and has been largely absent from the discussion of sustainability in Norwegian wool.

In the Norwegian wool industry, there has been a stronger focus on the sustainability of Norwegian wool as a fibre than on the sustainability of domestic production. The role of domestic production vs domestic fibre is difficult to disentangle since many of the Norwegian firms that use Norwegian wool also produce in Norway. Thus, local production and use of local fibre often comes hand in hand. Furthermore, many of the firms in the Norwegian wool industry have a strong local embeddedness expressed through their passion for local fibre and production, and this is visible in their marketing. Since localism, in a broad sense, is an important aspect to many of the stakeholders, it appears in several parts of the value chain and business models studied in this thesis.

1.3. The KRUS project – creating knowledge on the opportunities and challenges in the Norwegian wool industry

While Norwegian wool as a fibre has potential to contribute to more environmental sustainability in textiles, building a viable business around it can be more challenging.

Norwegian wool is coarser than for instance the more popular merino wool, which means that it can feel rougher or scratchier. This creates uncertainty regarding demand and limits its use potential in textiles.

Indeed, around 80% of Norwegian wool is sold in international auctions (Klepp & Tobiasson, 2017) and a large share of it goes to carpet production (Klepp et al., 2019). Most of the Norwegian wool that is used domestically goes to yarn production; other products based on Norwegian wool are scarce on the domestic market (ibid.). On the other hand, consumers often express preferences for domestic products in a variety of contexts (Alfnes, 2004; Hustvedt et al., 2013; Upadhyay & Singh, 2006). As a result, using a larger share of the domestically produced wool for more varied products in the domestic market represents a potential opportunity.

However, pursuing such opportunities might be challenging since the Norwegian wool industry is quite small and with few large actors, which limits the pool of potential partners in developing new business opportunities. In addition, the textile industry in Norway has been declining over the last decades, which means that those few companies that might be interested in increasing local production face a lack of qualified workforce.

Still, interest in using local fibres is growing rapidly within the industry. Furthermore, the increasing focus on fibre's sustainability issues (such as microfibre pollution) and localism (Bocken et al., 2014) are favourable developments for sustainability-oriented firms in the Norwegian wool industry. In this context of challenges and opportunities the KRUS project aims to:

> "improve the market for and the value of Norwegian wool and survey the opportunities for local production in a move towards a goal of sustainability in the fashion and textile sector, through increased knowledge of business opportunities and quality improvements throughout the wool value chain" (Klepp et al., 2019).

The project takes an interdisciplinary approach, exploring topics like i) marketing and transparency; ii) wool quality and breeding; iii) sustainable business development; vi) redefining sustainable fashion, and v) knowledge dissemination. This thesis is situated within work package three, which focuses on sustainable business development through innovation and entrepreneurship.

1.4. Objectives of the thesis

The aim of the work package the thesis is situated in has been to contribute theoretically and empirically to the sustainable business model and entrepreneurship research fields and create applicable knowledge for stakeholders in the Norwegian wool industry. The scope of sustainability issues in textiles span both the value chain and the life cycle. Likewise, addressing these issues requires a holistic approach. In line with these arguments and the aim of the project, the thesis focuses on several elements of the value chain (see figure 1) and has a twofold objective. On the one hand, it focuses on the firm-consumer interface and aims to explore how firms in the Norwegian wool industry can create more attractive value propositions and communicate them better (papers 1 and 2, figure 1). On the other hand, it also focuses on the firm in its business-to-business relations and aims to explore the practices of sustainability-oriented small and micro-entrepreneurs in the industry as they work to create new offerings under market uncertainty and resource constraints (papers 3 and 4, figure 1).

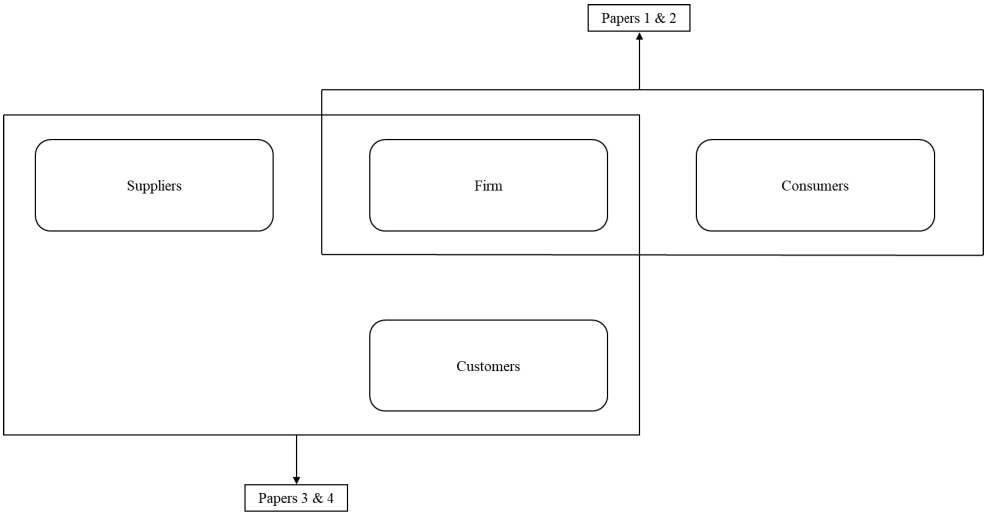

Figure 1. Overview of the thesis.

More specifically, in the firm-consumer interface paper 1 ("Informing sustainable business models with a consumer preference perspective") investigates consumer preferences for sustainable business model (SBM) elements. Paper 2 ("Translating sustainable business models to consumers") focuses on how firms communicate their BM sustainability efforts to consumers. When investigating the focal firm in its business-to-

business relations, paper 3 ("Localizing opportunities and industries in networks: a study of micro-entrepreneurs' embedded learning practices") explores the role of local embeddedness in relational entrepreneurial learning. Paper 4 ("The role of effectual networking in small business marketing") investigates how marketing practices play out in the small business context. Papers 1 and 2 contribute to the SBM literature, while papers 3 and 4 to the entrepreneurship research field. Together the four papers provide a more holistic understanding of the opportunities and challenges that lay within the Norwegian wool industry as it tries to move towards more sustainability.

2. Theory

This section outlines the main theoretical approaches used in the thesis. As the thesis focuses on several elements of the value chain, including producers and consumers, it required multiple theoretical lenses to best approach the topics of interest. As a result, the first part focuses on the literature used in papers 1 and 2, which explore the firm-consumer interface and covers the topics of BMs, SBMs, consumer preferences and translation theory. The second part focuses on the literature used in papers 3 and 4, that explore the firm in its business-to-business relations. It includes entrepreneurial learning, local embeddedness, entrepreneurial marketing and effectual networking.

2.1. The sustainable business model-consumer interface

BM research centres around the logic and activities of value creation delivery and capture (Osterwalder et al., 2005; Teece, 2010). BMs encompass both the production and consumption systems in which they are situated (Boons & Lüdeke-Freund, 2013) and are an obvious choice when exploring topics around the creation and communication of value propositions. Customer are an integral part of BMs, since the value creation delivery and capture activities are aimed at them. However, the BM literature has recently been criticised for its outdated view of the customer or consumer (Ojasalo & Ojasalo, 2018).

In related research fields, the customer is increasingly viewed as the co-creator of value (Grönroos, 2012; Vargo & Lusch, 2004). The value co-creation perspective is rooted in the notion that people buy offerings to obtain the services they provide (Vargo & Lusch, 2004) and that value emerges as it becomes embedded in the customer's context (Heinonen et al., 2010). There is increasing understanding that through incorporating

consumers more actively in the BM and the creation of value propositions it can both be a more viable way of organizing business and increase value for consumers (Klepp et al., 2019).

SBMs aim to create more multifaceted value to a wider range of stakeholders (Bocken et al., 2013). In addition to the benefits a consumer gets through using the offering, it can also include non-use value, such as preserving biodiversity or providing a living wage to workers. However, some of the non-use value attributes can offset other attributes desired by consumers (Song & Kim, 2018; Tunn et al., 2019). In addition, a common hinder to sustainable purchase is consumers distrust in firm's sustainability claims (Darnall et al., 2018). Research shows that firms struggle to convince consumers of the benefits of sustainable products or achieve consumer acceptance for them (Todeschini et al., 2017; Tunn et al., 2019). As the value propositions become more complex, firms need a better understanding of the different types of value that consumers are interested in as well as how to communicate them persuasively.

The communication aspect is present in some BM frameworks such as the BM canvas (Osterwalder & Pigneur, 2010) where it is located under channels. Also BMs in general can be used as communication devices to persuade external audiences (Doganova & Eyquem-Renault, 2009; Massa et al., 2017). They can help synthesize complex processes or technology through showing what kind of value is created and to whom (Chesbrough & Rosenbloom, 2002; Doganova & Eyquem-Renault, 2009). However, we know little about communicating BMs to consumers.

The activities and processes involved in creating more sustainable offerings can be uninteresting to consumers or difficult for them to understand. Firms have to find strategies to communicate their sustainability efforts in a way that is relevant and understandable to consumers. Translation theory (Sahlin & Wedlin, 2008; Wæraas & Nielsen, 2016) is one approach that can explores this type of communication. It helps understand how information that is context or community-specific can be conveyed to another community in a way that is meaningful and understandable to the receiving community (Bechky, 2003; Pawlowski & Robey, 2004).

A stronger focus on the SBM-consumer interface has at least two benefits for SBM research and practice. SBM research is an emerging field (Dentchev et al., 2018; Lüdeke-Freund & Dembek, 2017) and it is important to explore how other research fields can help inform and further the development of this field. Furthermore, in a move towards a

more sustainable future, firms have an active role to play in encouraging more sustainable consumption (Bocken, 2017; Boons & Lüdeke-Freund, 2013; Tunn et al., 2019). Having a stronger focus on the SBM-consumer interface can be a step in creating applicable industry-relevant knowledge that might help firms in this task. To address the theoretical challenges outlined above, paper 1 focuses on mapping out consumer preferences for various SBM elements, while paper 2 investigates how firms communicate their BM sustainability efforts to consumers.

2.2. Entrepreneurship: moving forward under uncertainty and resource constraints

Creating desirable value propositions and communicating them is one part of the challenge when moving towards more sustainability in textiles. Another challenge lays in the process of developing new value propositions with stakeholders in value chain when faced with market uncertainty and limited resources. These types of constraints are characteristic of many sustainability-oriented firms in the Norwegian wool industry, which proved a particularly conducive context to explore the collaborative aspects in entrepreneurship.

There have been considerable debates around the definition and domain of entrepreneurship research (Davidsson, 2015; Venkataraman, 1997; Venkataraman et al., 2012). However, one common denominator to most definitions is the aspect of novelty, which lay the foundation to the understanding that the entrepreneurial process is a process of learning (Minniti & Bygrave, 2001).

Entrepreneurial learning research has been based on individual and organizational learning theories (Wang & Chugh, 2014). However, such a focus neglects the mezzo (relational) level, which may be most relevant for understanding learning in small firms (Deakins & Freel, 1998). Another aspect to consider is that entrepreneurial learning is highly contextualized (Politis, 2005; Rae, 2005). Researchers have accounted for this contextualized nature by looking at e.g. prior experience (Politis, 2005) or immersion in a given industry (Rae, 2005). Recently, researchers started exploring the role of local embeddedness in entrepreneurship (Korsgaard et al., 2015; Müller, 2016; Müller & Korsgaard, 2018). Yet research in embedded learning experiences between various actors is still in its early stages (Cantino et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Soetanto, 2017).

The Norwegian wool industry provides an excellent context to study the role of local embeddedness in relational entrepreneurial learning for several reasons. First, as is common in the creative industries (Lee, 2015; Rae, 2005; Raffo et al., 2000), their activities are highly collaborative and network-based. Second, the sustainability-oriented firms in the Norwegian wool industry are typically small or micro and suffer from such liabilities of smallness as resource constraints. Thus they put extra value on learning through relations and networks (Lefebvre et al., 2015; Soetanto, 2017). Finally, they have a strong emotional and instrumental local embeddedness (Kibler et al., 2015) expressed through their passion for local fibre, production and craftsmanship, as well as using localism for marketing.

Another research stream that helps explore and understand how small firms can drive the entrepreneurial process under market uncertainty and resource constraints is entrepreneurial marketing (Morris et al., 2002). Marketing is a key challenge when it comes to small business survival and growth (Jones & Rowley, 2011). Entrepreneurial marketing as a research field emerged at the intersection of entrepreneurship and marketing research to help understand the marketing practices of small or emerging organizations.

The outset for entrepreneurial marketing is that traditional marketing theories might not be the best approach to understand marketing in small businesses. It distinguishes between conventional marketing, common in larger and established firms, and the more agile practices in smaller, emerging organizations (Hills et al., 2008).

Research shows that instead of focusing on the more traditional marketing frameworks, owner-managers of small or emerging firms might develop their own, informal marketing frameworks that focus on relational practices to reach the market (Franco et al., 2014; Stokes, 2000; Zontanos & Anderson, 2004).

Zontanos and Anderson (2004) argue that one of the differentiating factors in entrepreneurial marketing is the owner-manager's ability to network. However, research on entrepreneurial marketing has been criticized for omitting the inherently uncertain nature of entrepreneurship (Engel et al., 2017). To account for the unpredictability, goal ambiguity and interactive environment that characterize entrepreneurial networking under uncertainty, Engel et al. (2017) introduced the notion of effectual (Sarasvathy, 2009) networking.

Effectual networking differs from previous conceptualizations of entrepreneurial networking through incorporating an 'intelligently altruistic' (see also Van de Ven et al. (2007)) approach to creating and using network ties as well as openness to contingency and serendipity (Dew, 2009; Mirvahedi & Morrish, 2017). Effectual networking is useful in understanding entrepreneurial marketing because it helps account for both the relational and the uncertain nature of entrepreneurial marketing.

The importance of studying small businesses is unquestionable. Small and medium enterprises represented 99.8% of all enterprises[5] in the EU in 2016; micro-businesses (<10 employees) constituted 93% of those (Muller et al., 2017). Understanding how to empower them to move forward despite the typical constraints they face is therefore essential in a shift towards a more sustainable future. In line with these arguments, paper 3 focused on the role of local embeddedness in relational entrepreneurial learning among micro-entrepreneurs, while paper 4 investigated entrepreneurial marketing practices the small business context.

3. Methods

The methodological design and execution of each article is discussed in detail in each respective article. Instead of repeating them here, this section is used to focus on the rationale, benefits and challenges of using multiple methods[6] to explore a problem space. In the end of the section, other activities we engaged in to understand and interact with the research context are also discussed.

The methodological decisions in each of the articles in this thesis followed the position that the methodological design ought to be dictated by the research context and the problem of interest (Bryman, 2012). As a result, paper 1, which focuses on consumer preferences, has a quantitative survey design, while papers 2-4, which focus on the business actors in the Norwegian wool industry, are qualitative case studies. If used appropriately, multiple methods can serve to triangulate findings and to provide a more complete understanding of the research problem (ibid.). In this thesis, collecting data from stakeholders across the value chain, using multiple data collection and analysis

[5] Does not include the finance sector.
[6] I use the term multiple methods instead of mixed methods because the methods were not integrated within one study. Rather, they were used parallel and insights were aggregated.

methods allowed to develop a more complete picture of the challenges and opportunities that are spread across the value chain of Norwegian wool.

3.1. Qualitative methods for exploring contextualized social phenomena in depth

This thesis is a part of a larger research project that focuses on the Norwegian wool industry. On a global scale, the Norwegian wool industry is quite small. Within it, only a few of the actors are exploring the possibilities of using Norwegian wool and/or local production to achieve more environmental sustainability in textiles (although the interest in this topic appears to have increased in the last couple of years). Using quantitative methods to study this group of entrepreneurs was not feasible due to the small sample size. However, there were also other more compelling reasons to go for a qualitative approach.

First, explorative qualitative research is a suitable research strategy when investigating new subject areas and answering 'how' questions (Rowley, 2002), which was the focus of papers 2-4.

Furthermore, research has increasingly highlighted the contextualized nature of entrepreneurship (Müller & Korsgaard, 2018; Politis, 2005; Rae, 2005; Welter, 2011; Zahra et al., 2014). The entrepreneurial activities we focus on in papers 3 and 4 are no exception. When context is viewed as part of the explanation of human behaviour, it is important to use a methodological approach that allows to capture that aspect. Case studies are a suitable approach when investigating a phenomenon in depth and in its real-life context (Erickson, 2012; Simons, 2009; Yin, 2014).

The strong context focus in qualitative research partly contributes to the criticism of the lack of generalizability of qualitative findings. However, a number of scholars have also highlighted the value of contextualized research (Erickson, 2012; Flyvbjerg, 2006). In fact, Abhijit Banerjee, Esther Duflo and Michael Kremer received The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019 (The Nobel Prize, 2019) for their use of field experiments, which allow to account for variations in local contexts to a greater extent. The KRUS project clearly states its ambition to address issues at the local level, which points to the need to locally-specific knowledge.

To investigate the practices and processes of small scale industry actors as they try to develop viable business from their ideas we needed a zoomed-in micro view of their

actual activities and practices (Mueller et al., 2012). We chose various forms of interviewing and dialogue as most suitable to collect the type of in-depth data we needed.

To gain insight into the entrepreneur's background and daily experiences we chose semi-structured interviews, since they provide an overall structure, while still giving enough flexibility to adjust the course of the interview based on the development of each individual interview (Brinkmann & Kvale, 2015). Focus group interviews and café dialogues allowed to capture how people discuss an issue and construct meaning as members of a group, rather than individuals (Bryman, 2012; Morgan, 2002). It was an important aspect when focusing on collaborative practices, relational learning and networking.

To analyse the data, papers 2-4 use reflexive thematic analysis (Braun & Clarke, 2006; Braun et al., 2019), and paper 3 combines the thematic analysis with the Gioia methodology (Corley & Gioia, 2004; Gioia et al., 2013). The benefits of using reflexive thematic analysis is that it allows for codes, patterns and themes to emerge inductively from the data (Braun et al., 2019), which gives more flexibility to identify unanticipated patterns in the data. The Gioia methodology, on the other hand, is praised for its approach to tackle the questions of rigour in qualitative research (Gioia et al., 2013).

Typical critique of qualitative research includes that it is too subjective, difficult to replicate or generalize, lacks transparency, and that it is unclear how to appraise its quality (Bryman, 2012). A portion of this critique stems from evaluating qualitative research by quantitative research (originating from natural sciences) standards. This debate is situated within a larger epistemological discussion, namely – what constitutes acceptable knowledge in a scientific discipline. A larger overview of this debate is unfortunately beyond the scope of this introductory chapter.

3.2. Quantitative methods for generalizing to a relevant population

Every offering needs an outlet and exploring the challenges and opportunities in a value chain would be incomplete without including the consumer's perspective. A quantitative research design provided the necessary toolkit to achieve that.

In contrast to the previous section, the aim of collecting quantitative data is often generalizability (Bryman, 2012). We collect data from a large group of consumers not so much to say something about that particular group, as to be able to apply the results to the larger population of consumers from which the sample was derived. Furthermore,

the population of consumers is much larger than the population of e.g. sustainability-oriented textile firms in Norway. It makes the use of quantitative methods on the former much easier than on the latter.

Using survey designs is perhaps the most common way of collecting consumer data, not least due to its convenience, especially when conducted online (ibid.). In paper 1 we opted for a survey with a discrete choice experiment including best-worst scaling (BWS) (Louviere et al., 2015) to collect data on consumer preferences.

BWS allows to circumvent some of the criticism aimed at the more common rating-based stated preference methods, such as the Likert-scale (Bazzani et al., 2018). In BWS, respondents are asked to indicate one most attractive option ('best') and one least attractive option ('worst'). An important benefit of this approach is that respondents cannot mark everything as important (Lusk & Briggeman, 2009); furthermore, the findings are easier to interpret. Finally, a discrete choice framework is consistent with random utility theory. Resent random utility theory specifications allows for random taste variation as well as correlation over choices and alternatives (Alfnes, 2004; Bazzani et al., 2018; Train, 2009), and thus is said to have more realistic assumptions about individual's decision-making processes than previous specifications.

There is little doubt that both quantitative and qualitative research strategies have weaknesses as well as strengths. The responsibility of a researcher is to acquaint themselves with those strengths and weaknesses to select the most suitable methodological approach for their study, and/or offset the weaknesses through other strategies, such as using multiple methods.

3.3. Research context – understanding and interacting

To make sense of empirical data and carry out meaningful data analysis and interpretation, researchers have to be acquainted with the research context. The Norwegian wool industry has its own specific characteristics that are not readily known to outsiders. To collect data as well as gain a comprehensive contextual understanding of the findings we immersed ourselves into this industry for a total period of over four years (2015-2019).

We participated in industry events, such as the annual wool day, wool-related conferences as well as visiting production sites of the various entrepreneurs we interviewed. This participation played an essential role in being able to capture the finer

nuances of what was happening in the industry, how entrepreneurs perceived it and coped with it. It also helped build reciprocity, trust and rapport, which is vital in qualitative research.

The closeness to the industry and the interactive relationship with some of its members at times almost bordered action research (Stringer, 2013). For example, when organizing the focus group interviews and café dialogues, we created a full day workshop. The idea was to provide an additional meeting arena for the entrepreneurs aimed at stimulating potential future cooperation. On the same day, we also organized some professional development presentations held both by researchers affiliated with the project and a highly profiled entrepreneur to advise on marketing and business development strategies. The event was received very positively by the participants. In addition, on several occasions, the entrepreneurs were interested in hearing the opinions of the more senior researchers at the faculty on various issues they were encountering. Potential cooperation with master's students were also discussed.

Being so tightly interconnected with the research context also posed some potential challenges. The entrepreneurs are competitors and some of the challenges lie in defining and understanding which information can be shared with others and which cannot. Furthermore, in an industry this small, it can be challenging to ensure confidentiality. Even if respondents are anonymized in scientific publications, the descriptions of their firms (needed to give a better contextual understanding for external readers) or their quotations might reveal who they are to a knowledgeable reader. This might affect the openness of their answers and thus threaten the validity of the data. On the other hand, the small-scale actors within the industry exhibit high levels of openness, trust and cooperation, which gives confidence to the validity of the data.

4. Paper summaries

This section provides a brief overview of the papers that comprise this thesis. The papers are presented in an order that starts at the end of the value chain, first exploring what can be learned about the creation and communication of value propositions from the firm-consumer interface (papers 1 and 2). It then shifts the focus to the practices of the firm in its business-to-business relations as it works to create value for multiple

stakeholders in the wool value chain while faced with uncertainty and resource constraints (papers 3 and 4).

4.1. Paper 1 – Informing sustainable business models with a consumer preference perspective

Paper 1 addresses the objective of how to create attractive value propositions through mapping consumer preferences for SBM elements. Consumers are likely not aware of firm's BMs and do not have preferences for BM elements as such. However, consumers have preferences for product attributes, which can be related to the underlying BM elements required to create the desired attributes. In this study, we identified sustainable yarn product and store attributes visible to the consumer and related them to their underlying BM elements (cf. Osterwalder and Pigneur (2010)). We then elicited consumer preferences for the attributes through two discrete choice experiments, using best-worst scaling (Finn & Louviere, 1992) on a sample of 394 active Norwegian knitters.

We found evidence of consumer segmentation with respect to preferences for sustainability attributes, but also some stable preferences across segments. Pro-environmental attributes typically ranked higher than pro-social ones and product attributes ranked higher than store attributes. The use of environmentally friendly raw materials in yarn ranked consistently high for all segments, but no sustainability attribute was ranked at the top for any of the segments.

Sustainability-oriented firms need information about consumer preferences for sustainability attributes to create value propositions that are attractive to consumers. Our study revealed that many consumers are interested in multifaceted value propositions that bring value not only to themselves, but also to the environment and other people. However, they might not be willing to sacrifice other desired attributes, like softness, for sustainability attributes.

Another challenge is that some of the desired attributes, such as the use of environmentally friendly raw materials are not immediately visible to consumers. Reaching out to interested consumers with such attributes would require moving the BM elements into the value proposition. By default, this would make both the BM and the value chain more transparent, which is identified as one possible SBM archetype by Bocken et al. (2014) and a potential source of competitive advantage (Human Rights Watch).

We suggest that sustainability-oriented firms aiming to capture the value of their sustainability efforts, should leverage the information about consumer preferences for sustainable business model elements in their work with the business model element trio of customer segments, value proposition, and channels.

4.2. Paper 2 – Translating sustainable business models to consumers

Paper 2 picks up on some of the findings from paper 1 and focuses on how firms communicate their BM sustainability efforts to consumers. It highlights the importance of having a better understanding of the consumer's world in both BM research and practice.

To create an offering that has sustainability attributes, firms must embed sustainability efforts in some of the BM elements, such as key resources, key activities or key partners. However, as paper 1 discussed, in industries like textile, these sustainability efforts typically happen early in the value chain and are not necessarily visible to the consumer as an attribute of the final product. To capitalize on their sustainability efforts, firms would have to promote them to consumers.

However, persuasive communication of sustainable offerings is challenging for firms (Connell, 2010; Cowan & Kinley, 2014; Henninger et al., 2016; Jacobs et al., 2018). The study takes the view of consumers as co-creators of value, in that the value of an offering only emerges once the offering becomes embedded in the consumer's context (Heinonen et al., 2010; Vargo & Lusch, 2004). Thus, to communicate their BM sustainability efforts persuasively to consumers, firms would have to show the benefits or services those efforts provide in the consumer's domain. In other words – translate them (Sahlin & Wedlin, 2008).

Through a qualitative, explorative case study, this paper investigates how Norwegian yarn brands translate their BM sustainability efforts to consumers on the internet. Thematic analysis of firm's webpages, newsletters and social media profiles revealed that firms did not use BM terminology when communicating their BM sustainability efforts, which supports that firms indeed translated their sustainability efforts. Instead, the efforts were framed as product attributes or consequences to consumers, society or the environment. The study argues that framing sustainability efforts as consequences fulfils the criteria of translation better than framing them as

attributes and therefore might be a more persuasive strategy for communicating them.

Data analysis also revealed that firms with a strong sustainability or localism focus translated not only their BM sustainability efforts, but also the BM logic – their sustainability or localism goals. By doing this, firms were persuading consumers to buy into not only their offering, but also their values and goals, which might help them build more demand for their products.

4.3. Paper 3 – Localizing opportunities and industries in networks: a study of micro-entrepreneurs' embedded learning practices

Paper 3 marks the departure from the firm-consumer interactions and focuses on the firm in its business-to-business relations. While understanding the consumer's world and preferences is important, there are other challenges firms might face as they work to actualize their ideas.

Going against a dominant industrial paradigm such as fast fashion involves considerable uncertainty. It is extra challenging for small or new firms, that typically suffer from various liabilities, such as resource constraints. In paper 3 we explored some of these challenges by looking at how local embeddedness could facilitate opportunity recognition through learning in networks in the context of sustainability-oriented micro-entrepreneurs in the Norwegian wool industry.

Entrepreneurial activity (Welter, 2011; Zahra et al., 2014), including entrepreneurial learning (Politis, 2005; Rae, 2004; Rae, 2005), is embedded in a context that can both enable and constrain. Research in embedded learning experiences between various actors is still in its infancy (Cantino et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Soetanto, 2017). This study contributes to the field of relational entrepreneurial learning by expanding on its local embeddedness.

We used a combined thematic analysis (Braun & Clarke, 2006) and Gioia methodology (Gioia et al., 2013) to analyse data from individual and focus group interviews as well as café dialogues. Data analysis revealed that the entrepreneurs had a strong emotional local embeddedness – a passion for local fibre, production and maintenance of local craftsmanship skills. This shared emotional local embeddedness led them to seek out localized knowledge and, eventually, develop a community of practice.

Together, the shared emotional embeddedness and increasing cooperation within their community of practice laid the foundation for a means-driven co-creation in

learning to recognize opportunities. This allowed the actors to drive the entrepreneurial process forward despite the market uncertainty and resource constraints.

Our analysis also revealed that the entrepreneurs varied in the extent that they managed to leverage their local embedding for their benefits. Most entrepreneurs used their local network for simple help, such as sound-boarding. Very few managed to leverage their local embeddedness into something more substantial, such as committing their network to mutual investments in a business. In addition, some of the entrepreneurs engaged in bridging activities, where they moved the locally embedded knowledge from the local small business context to the dominant large-scale industry context, thereby helping the smaller actors increase their legitimacy and making them more attractive as potential collaborators.

4.4. Paper 4 – The role of effectual networking in small business marketing

Paper 4 continues to explore the firm in its business-to-business relations, shifting the focus to practices and processes surrounding small business marketing. Marketing in small businesses is different from larger firms, not least because of resource constraints. Small firms rarely have the resources to hire someone to focus solely on the task of marketing, thus marketing relies highly on the skills of the owner manager, who might not necessarily have formal education or prior experience on the topic.

Knowledge on marketing practices in the small business context is rather weak in the literature. We draw on the entrepreneurial marketing mix (Martin, 2009; Zontanos & Anderson, 2004), to conceptualise how marketing practices play out in the small business context through an in-depth case study of an owner manager who networks with different stakeholders to create new markets for Norwegian wool.

When acting under such unfavourable conditions as resource constraints and limited knowledge about market needs and conditions (as is the case when developing new products from Norwegian wool), small businesses rely on other marketing practices than traditional marketing literature would suggest. They can leverage a scarce resource base through partnering with other stakeholders (Morris et al., 2002) and effectually create the market themselves by employing the set of means already available to them at a given point in time (Read et al., 2009; Sarasvathy, 2001; Sarasvathy & Dew, 2005).

Our study demonstrated that market uncertainty can be reduced through effectual networking (Engel et al., 2017) producing highly beneficial outcomes for the small business. We propose a new model of the Entrepreneurial Marketing Mix under uncertainty, emphasizing the role of the owner-manager (Person) and their Purpose as the outset and driving force of the marketing process. We argue, that in early and uncertain phases, relying on the Person with a clear Purpose might be a good starting point in exploring new markets.

5. Summing up

The overall aim of the thesis has been to contribute theoretically and empirically to the sustainable business model and entrepreneurship research fields and create applicable knowledge for stakeholders in the Norwegian wool industry. To achieve that, a holistic perspective was taken, focusing on several elements of the value chain, including the firm-consumer interface as well as the firm in its business-to-business relations (see figure 1). This introductory chapter argues, that studying several elements of the value chain requires both multiple theoretical approaches and multiple methods. Furthermore, it argues that having such a pluralistic approach allows for developing a more complete picture of the opportunities and challenges that stakeholders in the Norwegian wool industry face in their move towards more sustainability.

Papers 1 and 2 help illuminate the firm-consumer interface. We find that consumers are primarily interested in conventional attributes, yet some pro-environmental attributes also ranked consistently high, irrespective of the presence of consumer's pro-environmental motives otherwise. Paper 2 extends these insights by exploring firm's sustainability communication strategies. It reveals a partial match between consumer's preferences for sustainability attributes and firm's communications about such attributes. Some of the firms link their environmental efforts to desirable use features for consumers, thereby addressing consumer preferences for conventional as well as sustainability attributes. Still, there are many firms that do not offer desirable sustainability attributes and rely on very simplistic communication strategies, which shows untapped market potential. In addition to the empirical findings, papers 1 and 2 contribute to SBM research by employing a novel focus on the SBM-consumer interface and thus integrating the consumer more strongly in SBM research.

Paper 2 links directly to the topic of paper 4 – entrepreneurial marketing. Paper 4 covers the early-stage marketing process in business-to-business relations, up until promotion to the final consumer. Paper 2 fills that gap and provides insights on promotion to consumers. Together, they shed light on the whole marketing process, starting with early-stage idea and product development under uncertainty and resource constraints, and finishing with strategies for communicating the value propositions.

The role of the local context has been highlighted consistently through all sections in this introductory chapter. It is an important background factor that also has implications for theoretical and methodological choices. The firms interviewed in this thesis expressed a strong and multifaceted local embeddedness. However, local contexts can both enable and constrain. Paper 3 explores this contextual factor by focusing on how firms can harness their local embeddedness to develop their business. Together, papers 3 and 4 contribute to entrepreneurship research through drawing attention to its collaborative and contextual aspects, especially when faced with uncertainty and constraints.

The introductory chapter started with positioning the thesis in a larger debate surrounding sustainability in textiles. It is safe to say, that the findings of this thesis will not solve the global sustainability challenges in the textile industry, but that was not its aim either. The results are primarily relevant for the Norwegian wool industry, and perhaps to some extent to other similar contexts. However, Norway is still a player, although a small one, in the global textile industry. Furthermore, it is among the richest countries in the world, and its consumers have high purchase power. Understanding the developments that happen in Norway regarding sustainable textiles is therefore an integral part of the global sustainable textiles debate.

In addition, the thesis can help to inform the sustainable textiles debate. Understanding the consumer's world is undoubtedly a key aspect of the sustainable textiles debate, especially when it comes to apparel. Decision-making about the consumption of apparel is very different from that of e.g. food, since it involves different risks, benefits and motives. For instance, ecological food producers can appeal to such egoistic values a health concerns, something that apparel producers can do to a much lesser extent. Furthermore, preferences vary by type of product. Our study showed that hinders typical to sustainable apparel consumption, such as unattractive design, does not necessarily pose a threat when purchasing yarn. This shows the importance of studying

consumer preferences and how to address them rooted in the specific context where sustainability improvements are wanted.

Small scale industry actors have a strong role in moving the industry towards more sustainability. The Pulse of the Fashion Industry report (Lehmann et al., 2019) indicated that a large share of the sustainability improvements in the industry in 2019 came from small-size players. Papers 3 and 4 help understand potential pathways to empower such small-scale sustainability-oriented actors to develop their businesses under various constraints. However, it is important to point out that while the findings from all four papers can help inform the global sustainable textiles debate, their applicability is not limited to that particular setting. Both understanding consumers and small business development are also important topics in other industries and in conventional firms.

The contextualized nature of this thesis limits the generalizability of its findings to other contexts. However, it is also argued that contextualized research is highly beneficial, especially when addressing locally-specific issues. Although these two statements have different outsets, they both point to the need for more research focused on producing locally-specific knowledge to address local problems. Further exploring how to integrate knowledge about the consumer's world early in the value creation process and the BM is also a promising research avenue, especially keeping in mind that firms have a role to play in encouraging more sustainable consumption. On the small-business side, our research uncovered a strong foundation of commonly shared values among many of the entrepreneurs, including sustainability and localism. It appeared to influence their business development decisions, but we did not delve deeper into that topic. Future research might explore the role that shared sustainability values among firms in an industry play in their attitudes and behaviours towards competition and cooperation.

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Paper 1

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Informing sustainable business models with a consumer preference perspective

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ABSTRACT

Sustainability-oriented firms can incorporate information about the sustainability of their business model elements into their value proposition. For some consumer segments, information about business model elements such as resources, activities, and partners will add value to the products and services offered by the firm. In this article, we study consumer preferences for these types of sustainable business model elements. We use a sample of 394 active Norwegian knitters to elicit ranked importance of sustainable attributes when choosing yarn labels and stores. Our findings indicate heterogeneous preferences for sustainable attributes. The most sustainability-oriented consumers ranked sustainable attributes related to the business model elements key partners, key resources, key activities, and channels higher than price. The sustainability of several of these business model elements is often not promoted toward customers. To integrate the valued business model elements into the value proposition, the yarn value chain must become more transparent and make pro-social and pro-environmental attributes visible to consumers. We suggest that sustainability-oriented firms aiming to capture the value of their sustainability efforts, should leverage the information about consumer segments for sustainable business model elements in their work with the business model trio of customer segments, value proposition, and channels.

1. Introduction

A business model (BM) "provides a link between the individual firm and the larger production and consumption system in which it operates" (Boons and Lüdeke-Freund, 2013). In sustainable business model (SBM) research, it is common to investigate the production system, such as circular supply chains (Geissdoerfer et al., 2018a), circular BMs (Lopes de Sousa Jabbour et al., 2019; Rosa et al., 2019), or sustainable production (Pal and Gander, 2018). The vast majority of SBM archetypes identified by Bocken et al. (2014) focus on the production system of the BM.

The consumption system has received scant attention, apart from a few recent exceptions, focusing on sustainable consumption in the circular economy (Tunn et al., 2019) or business-led sustainable consumption initiatives (Bocken, 2017). Sustainability-oriented firms need knowledge about consumer preferences for pro-social and pro-environmental attributes to put forward a value proposition that can convince consumers to buy their product. In this paper, we identify sustainable product and store attributes visible to the consumer and relate them to their underlying BM elements. Furthermore, we elicit consumer preferences for the attributes and discuss how the knowledge can be incorporated into SBM literature and practice. We use yarn production and sales as a case, and discuss the implications for sustainability-oriented firms, from an overall perspective and more specifically within the industry.

The SBM concept has its roots in the BM literature. A BM describes the design or logic for creating, delivering, and capturing value in an organization (Osterwalder et al., 2005; Teece, 2010). The SBM is an extension or modification of the BM (Geissdoerfer et al., 2018b) and addresses issues that the traditional BM concept has given little attention to, namely the social and environmental effects of running a business (Joyce and Paquin, 2016; Stubbs and Cocklin, 2008). Although academic inquiry into SBMs is relatively

Abbreviations: BM, Business model; SBM, Sustainable business model; NOK, Norwegian currency, the Norwegian Krone; GreenL, sample segment with the lowest pro-environmental motivation to knit/crochet; GreenM, sample segment with medium high motivation to knit/crochet; GreenH, sample segment with the highest pro-environmental motivation to knit/crochet.

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new, it has been steadily growing since the seminal article by Stubbs and Cocklin (2008). Empirical investigation into SBMs has focused on topics such as taxonomies (Lüdeke-Freund et al., 2018), archetypes (Bocken et al., 2014), or pattern databases (Remane et al., 2017) of SBMs, as well as firm's willingness (Schaltegger et al., 2012) and extent (Gauthier and Gilomen, 2016) of embracing sustainability in their BMs. SBM research is said to be prolific (Dentchev et al., 2018) and showing the characteristics of an emerging research field (Lüdeke-Freund and Dembek, 2017).

Recently, studies have also started to focus on the consumption system of the SBM. In addition to the traditional pathways - responding to *existing* consumer demand (Cohen and Winn, 2007; Dean and McMullen, 2007; Seyfang, 2005), research suggests that firms can play a proactive role in encouraging sustainable consumer behavior through changing production practices, satisfying consumer needs in new ways, and through new BMs (Bocken, 2017; Tunn et al., 2019). Some of this can be done through informing and educating (Glavas and Mish, 2015), positively or negatively directing (Bocken and Allwood, 2012), and marketing and choice editing (Bocken, 2017). Bocken (2017) and Boons and Lüdeke-Freund (2013) argue that companies need to keep experimenting with their BMs to find new ways to drive sustainable consumption.

The BM canvas synthesized by Osterwalder and Pigneur (2010) is a template encompassing nine elements: *key partners, key activities, key resources, value proposition, customer segments, channels, customer relations, cost structure,* and *revenue streams*. Sustainability-oriented firms can make sustainable choices in several of these BM elements and make them visible to the consumer through marketing them as product or service attributes – a part of the value proposition. An example is the Fairtrade organization, which works to secure better conditions for farmers and workers (Fairtrade International, 2019). The Fairtrade label indicates pro-social choices in the BM elements key partners, activities, and resources. It is marketed to consumers as a value proposition - the value of purchasing ethically.

The textile and fashion industry, because of its numerous sustainability challenges, is an industry where new ways of achieving sustainable production and consumption are sorely needed. The literature on sustainability in this industry shows that it is a major contributor to numerous environmental and social issues (EcoWatch, 2015), such as air and water pollution, loss of biodiversity, land degradation, low wages, unsafe working conditions, and use of child labor, to name a few (Fletcher, 2013; Laitala et al., 2018; Pal and Gander, 2018).

We investigate one aspect of this industry, knitting yarn. In a recent Norwegian survey, every fourth adult respondent (nearly half of all women) said they had knitted something in the last 12 months, while estimates of knitters in the UK equal about 9% of the population (Laitala and Klepp, 2018). As the interest in handicraft such as knitting has grown rapidly among young women in recent years (Myzelev, 2009; Stannard and Mullet, 2015), the sustainability of the different operations in the yarn value chain has become an increasingly important topic for its producers and sellers.

Many of the Norwegian yarn stores and producers incorporate some level of sustainability in BM elements such as key activities, partners, and resources. Yarn consumers cannot observe the SBM elements directly, but the elements can be presented to consumers through sustainable product or service attributes. Such sustainability attributes include selling ecological or organic yarn, yarn from natural fibers, recycled materials, fair trade yarn, firms contributing to charitable causes, or having an environmental focus in transportation and packaging. However, it remains unclear to what extent consumers are interested in these attributes and the underlying SBM elements, or which of them are more important for consumers. To elicit consumer preferences related to sustainability in yarn production and sales, we conducted a survey with two discrete choice experiments, using best-worst scaling. We tie the findings of these experiments back to the SBM concept and provide suggestions on how knowledge about consumer preferences for sustainability attributes can be used to inform the SBM literature and practice.

2. Methods and data

2.1. Data collection

Data were collected through an online survey of active knitters in Norway in the spring of 2018. The survey was conducted with the help of the organizer of the largest knitting festival in Norway (Oslo Strikkefestival, which had 6200 participants in 2017) and included questions about handicraft experiences, yarn-shopping habits, as well as two choice experiments. The knitting festival's newsletter and social media accounts were used to recruit participants. A total of 444 knitters responded. Five respondents did not agree to their answers being used for scientific research and publication, while another 45 did not complete the choice experiment questions, leaving 394 useable survey responses. The majority of the respondents were women (88.8%) and knitted every day or several times a week (93.2%). Most were in the age groups 35–44 y (28.2%), 25–34 y (26.4%), and 45–54 y (20.1%) (see Table 1). Almost two-thirds came from Norway's capital, Oslo, and neighboring municipalities (63.2%).

We divided the knitters into pro-environmental segments based on their motives to knit or crochet. The survey included a four-point Likert-scale question inquiring about the main reasons why respondents knitted. Among the 11 alternatives, two pro-environmental motives for knitting were present - "to reduce the amount of clothing I buy" and "to reduce my negative impact on the environment". Respondents obtained scores between two (if they strongly disagreed to both statements) and eight (if they strongly agreed to both statements). The GreenL segment consisted of those with the lowest score (2–3) and included respondents that had none or low pro-environmental motivation for knitting. The GreenM segment consisted of those with a medium score (4–5) and included those with medium pro-environmental motivation to knit. The GreenH segment consisted of those with a high score (6–8) and included those with strong pro-environmental motivation to knit. It is important to note that all respondents had a multitude of reasons to knit and pro-environmental motives were never the sole driver. Reasons such as relaxing, being able to use things made by oneself, expressing creativity, and being productive during spare time were among the most common for all segments.

Three respondents did not answer the motivation questions. As a result, the data analysis for the full sample includes three respondents more than the sum of the pro-environmental segments. Table 1 presents the means and standard deviations of the motivation scores for all segments and the full sample, as well as age, expenses when buying yarn and most frequent raw materials used.

2.2. BM elements as choice experiment attributes

Consumers interact with the outcome of the BM – the product or service – not the BM as a conceptual tool. This poses challenges

Table 1
Full sample and segments. Means and percentages of answers of selected questions.

Question	Answer options	Full sample (N = 394)	GreenL (N = 110)	GreenM (N = 148)	GreenH (N = 133)
Age (y)	15–24	3.1%	3.2%	2.3%	4.0%
	25–34	29.4%	29.8%	27.3%	31.8%
	35–44	31.1%	27.6%	29.7%	36.5%
	45–54	22.4%	25.5%	23.4%	19.1%
	55–74	13.5%	13.9%	13.6%	8.8%
Motivation to knit/crochet	1. To reduce the amount of clothing bought	2.3 (1.0)	1.2 (0.4)	2.1 (0.7)	3.3 (0.6)
Mean* (standard deviation)	2. To reduce own negative impact on the environment	2.4 (1.0)	1.3 (0.5)	2.3 (0.6)	3.4 (0.5)
	Both 1 and 2	4.6 (1.8)	2.5 (0.5)	4.4 (0.5)	6.7 (0.8)
Typical amount spent on a skein of yarn	0–49 NOK**	18.1%	23.9%	17.8%	13.6%
	50–74 NOK	49.9%	46.8%	53.4%	47.8%
	75–99 NOK	19.3%	18.4%	15.1%	25.0%
	100 NOK and more	12.7%	11.0%	13.8%	13.6%
Highest amount spent on a skein of yarn in the last 12 months	0–74 NOK	9.9%	11.9%	12.9%	4.6%
	75–124 NOK	34.0%	35.8%	30.5%	36.1%
	125–174 NOK	28.4%	31.2%	27.0%	28.6%
	175 NOK and more	27.7%	21.1%	29.8%	30.8%
Most and least common raw materials in yarn used	Wool and other animal fibers	4.8 (0.4)	4.8 (0.5)	4.8 (0.5)	4.9 (0.3)
Mean*** (standard deviation)	Synthetic fibers	1.2 (0.5)	1.2 (0.5)	1.3 (0.6)	1.2 (0.5)
	Blends of natural and synthetic fibers	2.3 (1.1)	2.2 (1.1)	2.3 (1.1)	2.3 (1.1)
	Cotton	2.0 (0.9)	2.0 (0.9)	2.1 (0.9)	2.0 (0.9)
	Linen	1.8 (0.8)	1.7 (0.7)	1.7 (0.8)	1.8 (0.8)
	Blends of natural materials	2.9 (0.9)	2.8 (0.8)	3.0 (0.8)	2.8 (1.0)

Notes: *Values: 1-totally disagree, 2-somewhat disagree, 3-somewhat agree, 4-totally agree; **NOK – local currency, the Norwegian Krone; ***Values: 1-never/almost never, 2-rarely, 3-sometimes, 4-often, 5-always/almost always.

when trying to uncover consumer preferences for BM elements. However, this can be done through inquiring about the attributes of a product or service, which are the result of a firm's unique configuration of various BM elements. To operationalize the BM elements as product and store attributes that consumers would recognize, we visited the websites of 20 yarn producer brands, 20 online shops, and the locales of 10 physical shops. The producers investigated constitute the vast majority of yarn producers in Norway, including large-, small-, and micro-actors, but not farms selling their own produce. Selection criteria for online shops required retailers with a Norwegian country domain and an exclusive focus on yarn. To avoid overlap, we did not include websites of yarn brands, producers, or physical shops. The physical yarn shops were selected from Oslo and neighboring municipalities, the area where the majority of survey respondents also came from.

When investigating the firms, we looked for product and store attributes visible to the consumer, both generic (e.g., offering a wide selection of yarn and knit accessories) and sustainability-oriented (e.g., the availability of ecolabel yarn). Each identified attribute was categorized under one or more relevant elements of the BM canvas synthesized by Osterwalder and Pigneur (2010), such as key resources key activities or key partners.

In line with Gauthier and Gilomen (2016), we observed that firms varied in the extent to which they embraced sustainability. To further ensure that the choice experiments contained attributes familiar to most consumers, we selected the ones occurring most frequently. The attribute list was tested in a pilot study and refined thereafter. In the end, we had 15 attributes related to the BMs of yarn producers and 15 to yarn stores. Tables 2 and 3 present the final list of attributes, their respective BM canvas elements and labels used in the data analysis and results section.

All identified attributes, except 'positive previous experiences' and 'recommended by others', can be considered as part of the value proposition. However, the creation and delivery of each of the value proposition attributes require the engagement of other BM elements as well. For instance, the production of ecolabel yarn uses environmentally friendly raw materials as *key resources* and has a relatively low environmental impact as a *key activity*, whereas a shop selling ecolabel yarn indicates *key partners* with reduced negative environmental impact. The column 'BM elements' in Tables 2 and 3 captures this aspect and contains relevant BM elements (other than the value proposition) required to create or deliver a given attribute.

2.3. The choice experiment

We conducted two choice experiments with best-worst scaling. The best-worst scaling format was first presented by Finn and Louviere (1992) and used in studies of consumer preferences for food (Bazzani et al., 2018; Lusk and Briggeman, 2009), consumers' ethical beliefs (Auger et al., 2007), and healthcare (Flynn et al., 2007).

The store attributes and product attributes were randomly divided into three store choice sets and three product choice sets. To get variation in the attribute combinations, we created five triples of store choice sets and five triples of product choice sets. The respondents were randomly assigned one triple containing store attributes and one triple containing product attributes. Hence, each respondent saw each of the attributes once during the choice experiment.

In each choice set, the respondents were asked to indicate which of the five attributes were most and least important for their choice of product or store. In our case, participants were asked to indicate which of the subsets of attributes from Tables 2 and 3 where *most* and *least* important in their choice of yarn and yarn store, respectively (Illustrations 1 and 2).

Illustration. 1. Example of product choice question from the survey.

If you were to choose between two types of YARN of the same color and thickness, what would then be other relevant selection criteria? Please choose one that is most important and mark it with 1 and one that is least important and mark it with 5. You do not need to mark 2, 3, and 4.

The suppliers of the yarn producer provide good working conditions for their employees
The yarn's place of origin
Price
The whole production process is situated in Norway
The yarn producer provides good working conditions for its employees

Illustration. 2. Example of store choice question from the survey.

What is most and least important to you when you choose a YARN SHOP? Please choose one that is most important and mark it with 1 and one that is least important and mark it with 5. You do NOT need to mark 2, 3, and 4.

The shop is at a convenient location
Price level at the shop
The shop has a flexible return policy
The shop sells yarn from Norwegian producers
The shop sells yarn that is certified to be environmentally friendly

It is important to note that we asked which attributes were most and least important if one chose between two yarns *of equal color and thickness*. These two attributes are closely related to the product to be made. As such, they are likely to rank higher than the less tangible attributes included in the choice sets. Thus, when we discuss consumer preferences for product attributes, the preferences are conditional on the person finding yarn of desirable color and thickness.

Stated preferences studies have some limitations. They might not capture the attitude-behavior gap common in sustainable consumption (Boulstridge and Carrigan, 2000). In addition, studies on sustainable behaviors can suffer from socially desirable responding (Paulhus, 2001) with all attributes indicated as very important. The best-worst scaling was chosen to reduce some of these challenges. In this comparative method, the respondents can only choose one attribute as best in each choice set and are therefore forced to compare and rank the attributes. Hence, they cannot say that all attributes are very important.

2.4. Data analysis

To analyze the choice data, we use a mixed logit model that allows random taste variations, correlation over choices, and correlation over alternatives (Alfnes, 2004; Bazzani et al., 2018; Train, 2009). The mixed logit model is consistent with random utility models and assumes that consumers are able to choose the attributes most and least important to their utility. We specify the following random utility model:

$$U_{nij}^{m} = V_{nij}^{m} + \varepsilon_{nij}^{m} = \sum_{n=1}^{15} \beta_{ni}^{m} x_{nij}^{m} + \varepsilon_{nij}^{m} \quad (1)$$

where U_{nij}^{m} is individual i's utility from attribute n in choice situation j in evaluation m; x_{nij}^{m} are dummy variables indicating the attributes and the β_{ni}^{m} are the corresponding random effect parameters; ε_{nij} is an extreme value distributed error term; and $m \in [store, yarn]$, $i \in [1;394]$, $n \in [1;15]$, and $j \in [1;3]$. The dummy variables follow the maximum-difference procedure described in Flynn and Marley (2014), where the worst choice attribute is coded with negative dummies.

For identification, one of the parameters must be selected as a baseline and predefined. We chose price as the baseline parameter and normalized it to zero. The values of the parameters are interpreted relative to each other within the same estimation. The attribute with the highest parameter value is on average viewed as most important, while the attribute with the lowest value is on average viewed as the least important. Since the price parameter was chosen as the baseline, the signs of the other parameters indicate whether the corresponding attributes are seen as more or less important than price in the average consumer's choice.

3. Results

Tables 4 and 5 present the results from the mixed logit model for the producers and stores, respectively. For evaluating the results, it is important to know that we can compare parameter sizes within one column, and rankings across columns. We cannot compare parameter sizes across columns. For easy interpretation of the preference ranking, the attributes in each column are presented ranked in descending order of importance. The first column shows the ranking for the whole sample, while columns two to four show the ranking for the three pro-environmental motivation segments. The subsamples GreenL, GreenM and GreenH have low, middle, and high pro-environmental motivation for knitting, respectively (see section 2.1 for a more detailed description on how respondents were allocated to the different subsamples).

From Table 4, we can see that positive previous experiences and tactile features are the most important attributes when choosing between yarns of equal color and thickness. These two attributes were ranked highest in both the overall sample and in all three segments. Similarly, from Table 5, we can see that selection, nice staff, positive previous experiences, and selling yarn from Norwegian producers were the four most important attributes when choosing a store in both the overall sample and in all three segments. Hence, sustainability attributes were not ranked at the top, neither when choosing a store or product, nor in any of the segments.

There is a clear difference between segment GreenL on the one hand and the segments GreenM and GreenH on the other. For both products and stores, the former ranked all sustainability attributes as less important than price, while the latter two ranked most sustainability attributes as more important than price (in bold font in Tables 4 and 5).

The higher ranking of price within the GreenL segment can

Table 2
Product and producer attributes evaluated by consumers.

	Label	Attribute	BM elements
1	Env. impact - raw materials	The raw materials used are environmentally friendly 🌿	Key resources Key partners
2	Env. impact - production process	The production process has a relatively low environmental impact 🌿	Key activities Key resources
3	Env. impact - suppliers	The suppliers of the yarn producer have a relatively low environmental impact 🌿	Key partners
4	Working conditions - producer	The yarn producer provides good working conditions for its employees ↗	Key activities Key resources
5	Working conditions - suppliers	The suppliers of the yarn producer provide good working conditions for their employees ↗	Key partners
6	Contributing to charitable causes	The yarn producer contributes to charitable causes ↗	Key activities Revenue streams
7	Yarn's origin	Yarn's place of origin	Key partners Key activities Key resources Cost structure
8	Produced in Norway	The whole production process is situated in Norway	Key partners Key activities Key resources Cost structure
9	Tactile features	The yarn is pleasant to the touch	Key resources Key activities
10	Price	Price	Cost structure Revenue streams
11	Attractive packaging	The yarn is nicely packed and labeled	Customer relationships Channels
12	Ordering online	The yarn producer sells its yarn online	Channels
13	Buying directly from producer	It is possible to buy yarn directly from the producer	Channels
14	Positive previous experiences	Previous positive experiences with yarn from the producer	Customer relationships
15	Recommended by others	The yarn producer is recommended by others	Customer relationships Channels

Notes: BM = business model; 🌿 - pro-environmental attributes; ↗ - pro-social attributes.

Table 3
Store attributes evaluated by consumers.

	Label	Attributes	BM elements
1	Env. focus in packing and transport	The shop has an environmental focus when it comes to packaging and transportation 🌿	Channels Key activities
2	Sells ecolabel yarn	The shop sells yarn that is certified to be environmentally friendly 🌿	Key partners
3	Working conditions - suppliers	The shop's suppliers provide good working conditions for their employees ↗	Key partners
4	Contributing to charitable causes	The shop contributes to charitable causes ↗	Key activities Revenue streams
5	Selection	The shop has a wide selection of yarn and knitting accessories	Key activities Key resources Key partners
6	Sells yarn from Norwegian producers	The shop sells yarn from Norwegian producers	Key partners
7	Price	Price level at the shop	Cost structure Revenue streams
8	Loyalty discounts	The shop offers various discounts to loyal customers	Customer relationships Revenue streams
9	Ordering online	The possibility to order yarn online	Channels
10	Delivery time	The shop has a fast delivery time when ordering yarn online	Channels
11	Flexible return policy	The shop has a flexible return policy	Customer relationships Channels
12	Location	The shop is at a convenient location	Channels
13	Nice staff	The staff are friendly and knowledgeable	Customer relationships
14	Positive previous experiences	Positive experiences with previous visits to the shop	Customer relationships
15	Recommended by others	The shop is recommended by others	Customer relationships Channels

Notes: BM = business model; 🌿 - pro-environmental attributes; ↗ - pro-social attributes.

either mean that the segment is more price-sensitive than the other segments, or that the other attributes are irrelevant to GreenL. When asked in another question how much they on average tend to spend for a skein of yarn, as well as the cost of the most expensive skein of yarn purchased within the past 12 months, all groups provided very similar answers (see Table 1), showing little evidence of differences in price sensitivity. Hence, our interpretation is that the other attributes are seen as irrelevant by the GreenL segment. Indeed, Tables 4 and 5 show that segments with stronger pro-environmental motivation to knit ranked more sustainability attributes higher than those with weaker motivation.

When it comes to sustainability attributes, the first thing that stands out is that the use of environmentally friendly raw materials in yarn is an attribute that ranked consistently high for all groups (Table 4, rank 3 and 4). We did not specify the raw material in the experiment, but another survey question revealed that most respondents almost always used yarn from wool or other animal fibers and almost never used yarn made only from synthetic fibers

Table 4
Consumer preferences for product and producer attributes.

Rank	Full sample (N = 394) *Mean (Std. Err)*	GreenL (N = 110) *Mean (Std. Err)*	GreenM (N = 148) *Mean (Std. Err)*	GreenH (N = 133) *Mean (Std. Err)*
1	Positive previous experiences 2.44*** (0.30)	Tactile features 4.70*** (1.59)	Positive previous experiences 3.00*** (0.48)	Positive previous experiences 1.91*** (0.42)
2	Tactile features 1.96*** (0.30)	Positive previous experiences 3.88*** (1.22)	Tactile features 1.73*** (0.47)	Tactile features 1.77*** (0.45)
3	Env. impact - raw materials ☘ 1.27*** (0.25)	**Price** **0 (not estimated)**	Env. impact - raw materials ☘ 1.70*** (0.39)	Env. Impact - raw materials ☘ 1.53*** (0.37)
4	Produced in Norway 0.61*** (0.23)	Env. impact - raw materials ☘ −0.20 (0.52)	Produced in Norway 0.90** (0.40)	Produced in Norway 1.22*** (0.40)
5	Env. impact - production process ☘ 0.24 (0.18)	Produced in Norway −0.68* (0.40)	Env. impact - production process ☘ 0.47 (0.29)	Env. impact - production process ☘ 1.17*** (0.33)
6	Yarn's origin 0.11 (0.22)	Working conditions - suppliers ↗ −0.73* (0.38)	Yarn's origin 0.45 (0.37)	Env. impact - suppliers ☘ 0.85*** (0.32)
7	**Price** **0 (not estimated**)	Yarn's origin −0.97** (0.45)	Working conditions - producer ↗ 0.39 (0.28)	Yarn's origin 0.63* (0.37)
8	Env. impact - suppliers ☘ −0.03 (0.21)	Recommended by others −1.01** (0.42)	Env impact - suppliers ☘ 0.16 (0.38)	Working conditions - producer ↗ 0.47* (0.28)
9	Working conditions - suppliers ↗ −0.05 (0.17)	Env impact - production process ☘ −1.09*** (0.35)	Working conditions - suppliers ↗ 0.13 (0.29)	Working conditions - suppliers ↗ 0.41 (0.29)
10	Working conditions - producer ↗ −0.11 (0.16)	Working conditions - producer ↗ −1.32*** (0.32)	**Price** **0 (not estimated)**	**Price** **0 (not estimated)**
11	Recommended by others −0.89*** (0.24)	Env. impact − suppliers ☘ −1.35*** (0.41)	Recommended by others −0.43 (0.41)	Recommended by others −0.53 (0.38)
12	Buying directly from producer −1.35*** (0.24)	Attractive packaging −1.84*** (0.54)	Buying directly from producer −1.03** (0.40)	Buying directly from producer −0.91** (0.37)
13	Ordering online −1.45*** (0.24)	Buying directly from producer −1.93*** (0.48)	Ordering online −1.49*** (0.42)	Ordering online −0.99*** (0.38)
14	Contributing to charitable causes ↗ −1.99*** (0.25)	Ordering online −2.11*** (0.61)	Contributing to charitable causes ↗ −1.55*** (0.38)	Contributing to charitable causes ↗ −1.13*** (0.33)
15	Attractive packaging −2.24*** (0.30)	Contributing to charitable causes ↗ −3.09*** (0.54)	Attractive packaging −2.38*** (0.54)	Attractive packaging −2.03*** (0.50)

***p < 0.01, **p < 0.05, *p < 0.1. Baseline − price. ☘ - pro-environmental attributes; ↗ - pro-social attributes.

Table 5
Consumer preferences for store attributes.

Rank	Full sample (N = 394) *Mean (Std. Err)*	GreenL (N = 110) *Mean (Std. Err)*	GreenM (N = 148) *Mean (Std. Err)*	GreenH (N = 133) *Mean (Std. Err)*
1	Selection 3.53*** (0.37)	Selection 3.24*** (0.71)	Selection 4.11*** (0.61)	Selection 2.49*** (0.60)
2	Nice staff 2.23*** (0.25)	Positive previous experiences 2.16*** (0.50)	Nice staff 2.51*** (0.41)	Sells yarn from Norwegian producers 2.23*** (0.51)
3	Positive previous experiences 2.04*** (0.23)	Nice staff 1.77*** (0.45)	Sells yarn from Norwegian producers 2.17*** (0.39)	Nice staff 2.06*** (0.43)
4	Sells yarn from Norwegian producers 1.96*** (0.24)	Sells yarn from Norwegian producers 1.20*** (0.37)	Positive previous experiences 1.73*** (0.38)	Positive previous experiences 2.01*** (0.36)
5	Location 1.22*** (0.23)	Location 0.94** (0.43)	Location 1.65*** (0.42)	Env. focus in packing and transport ☘ 1.20*** (0.32)
6	Working conditions - suppliers ↗ 0.62*** (0.20)	Ordering online 0.19 (0.43)	Working conditions - suppliers ↗ 0.83*** (0.32)	Location 1.11*** (0.39)
7	Env. focus in packing and transport ☘ 0.40** (0.19)	**Price** **0 (not estimated)**	Env. focus in packing and transport ☘ 0.75** (0.31)	Working conditions - suppliers ↗ 0.97*** (0.32)
8	Sells ecolabel yarn ☘ 0.27 (0.22)	Loyalty discounts −0.01 (0.41)	Sells ecolabel yarn ☘ 0.30 (0.36)	Sells ecolabel yarn ☘ 0.72* (0.37)
9	**Price** **0 (not estimated)**	Working conditions - suppliers ↗ −0.31 (0.39)	Delivery time 0.10 (0.41)	Recommended by others 0.05 (0.33)
10	Recommended by others −0.17 (0.20)	Recommended by others −0.37 (0.38)	Ordering online 0.06 (0.35)	**Price** **0 (not estimated)**
11	Ordering online −0.18 (0.22)	Delivery time −0.44 (0.46)	**Price** **0 (not estimated)**	Contributing to charitable causes ↗ −0.54 (0.38)
12	Loyalty discounts −0.25 (0.23)	Sells ecolabel yarn ☘ −0.56 (0.44)	Recommended by others −0.21 (0.33)	Loyalty discounts −0.57 (0.41)
13	Delivery time −0.49** (0.25)	Flexible return policy −0.88** (0.44)	Contributing to charitable causes ↗ −0.35 (0.33)	Delivery time −0.63 (0.45)
14	Flexible return policy −0.59*** (0.22)	Env. focus in packing and transport ☘ −1.11*** (0.38)	Loyalty discounts −0.36 (0.40)	Ordering online −0.70* (0.37)
15	Contributing to charitable causes ↗ −0.80*** (0.22)	Contributing to charitable causes ↗ −1.95*** (0.47)	Flexible return policy −0.39 (0.37)	Flexible return policy −0.74* (0.41)

***p < 0.01, **p < 0.05, *p < 0.1. Baseline − price. ☘ - pro-environmental attributes; ↗ - pro-social attributes.

(see Table 1). The choice of raw material is one of the core issues when it comes to cleaner production in textiles. This concerns both the effects of producing the raw material, such as land and water use (Pfister et al., 2011), as well as the environmental effects the material has when in use, e.g. shedding microplastic particles during wash (Laitala et al., 2018).

The production process having a reduced negative environmental impact was ranked high for groups GreenM and GreenH (Table 4, rank 5). The production process in yarn encompasses many elements, from the procurement of the fiber, various mechanical and chemical treatments, to spinning and twisting. As in textiles generally (Laitala et al., 2018), washing, dyeing and application of other properties, such as 'superwash' treatment are the common stages where environmental impacts occur. Both the choice of raw material and a cleaner production process are attributes that are important in sustainable apparel consumption as well (Henninger et al., 2016; Lundblad and Davies, 2016; Peterson et al., 2012).

Social attributes (marked with ↗ in Tables 4 and 5), such as working conditions, were typically ranked lower than environmental attributes (marked with in Tables 4 and 5). Some scholars speculate that one of the reasons why they are less important to consumers might be the research setting (Henninger et al., 2016) such as Norway, which has strict labor laws and a well-developed union network. Furthermore, all groups in both experiments ranked one social attribute, contributing to charitable causes, consistently low. One possible explanation for the low ranking is that this attribute has no connection with the yarn production or sales process. Interestingly, this attribute is increasingly popular among yarn producers in Norway.

Origin attributes were ranked high, especially yarn being produced in Norway (Table 4, rank 4 and 5) and shops selling yarn from Norwegian producers (Table 5, rank 2 and 4). Consumers often express preferences for domestic products in apparel (Hustvedt et al., 2013; Peterson et al., 2012) and food (Alfnes, 2004), as well as other goods (Upadhyay and Singh, 2006). However, the existence of a positive relationship between local origin and sustainability is debated (Curtis, 2003; DuPuis and Goodman, 2005; Hess, 2008).

Among the highest-ranking sustainability attributes for stores was having an environmental focus when it comes to transportation and packaging (Table 5, rank 4 and 5 for groups GreenH and GreenM respectively). This is an interesting finding, because, on the one hand, very few stores actually had such a focus. On the other hand, issues such as carbon gas and plastic pollution are currently very central in the public debate on sustainability, which might explain why consumers would rank it as important, even though it was not commonly encountered.

Another sustainability attribute that ranked high for stores was having suppliers that provide good working conditions for their employees (Table 5, rank 6 and 7 for groups GreenM and GreenH respectively). This attribute is, in essence, about yarn producers rather than stores. Yet, interestingly, this attribute ranked lower in the product experiment than in the store experiment. This result also goes against the general trend where sustainability attributes were, on average, ranked lower for stores than for products.

In fashion, online retailing is becoming increasingly popular (Jacobs et al., 2018); however, respondents in our sample ranked online availability of yarn consistently low (Table 4 rank 13 and 14, Table 5 rank 10 and 14 for groups GreenM and GreenH respectively), irrespective of the distance from their closest yarn shop. One possible explanation could be that tactile features of yarn are a very important attribute for all groups. Online shopping does not provide the opportunity for customers to investigate tactile features prior to purchase. In yarn retail, this points to the importance of having a physical outlet for the goods sold.

To sum up, we have found evidence of consumer segmentation with respect to preferences for sustainability attributes, but also some stable general attribute preferences across segments. Pro-environmental attributes ranked higher than pro-social ones and product sustainability attributes ranked higher than those of stores. The use of environmentally friendly raw materials in yarn was one attribute that ranked consistently high for all segments, but no sustainability attribute ever topped the preference rankings.

4. Discussion

One of the main challenges sustainability-oriented apparel firms face is how to make sustainable purchases easier for consumers (Henninger et al., 2016). Recent research suggests that one of the factors influencing sustainable apparel consumption is knowledge regarding the social and environmental effects of its production and consumption (Connell, 2010), and how consumer action can affect it (Henninger et al., 2016). However, the effects of such information on consumer behavior can be mixed (Joshi and Rahman, 2017; Peterson et al., 2012). As a result, firms have to be careful when deciding which sustainability-related information to market and to whom (Peterson et al., 2012; Sneddon et al., 2012). Our findings point to the importance of two BM elements to address this challenge, namely *customer segments* and *value proposition*.

4.1. Different strokes for different folks

A value proposition is a description of a product or service as well as the articulation of its benefits (Ladd, 2018). Creating and delivering a value proposition to the customer requires the whole BM, but the customer is typically only aware of the value proposition because that is the BM element that is marketed to them. This lack of transparency of the BM and value chain is one of the criticisms directed at the apparel industry, because it helps hide unsustainable and unethical practices from the customers (Fashion Revolution). However, this trend is changing (Human Rights Watch).

Our findings point to a clear customer segmentation with respect to their preferences for sustainability attributes. Customer segments encompass the "groups of paying customers with common needs and attributes" (Ladd, 2018). In our sample, we identified at least two distinct segments with common needs and attributes: those interested in sustainability attributes and those that were not. The GreenL segment shows little interest in sustainability attributes. In addition, this segment ranked all sustainability attributes lower than price, which indicates that they are not likely to pay a price premium for such attributes. However, GreenM and GreenH are customer segments that show clear interest in these attributes. Both ranked most sustainability attributes higher than price, which indicates willingness to pay a price premium for sustainability attributes. This corresponds to recent literature pointing to a higher willingness to pay for sustainable apparel items among interested consumers (Chekima et al., 2016; Jacobs et al., 2018; Lundblad and Davies, 2016). The top ranked sustainability attributes have interesting implications for firms' BMs in general and value propositions specifically.

We see in our findings that the pro-environmental customer segment, contrary to Cowan and Kinley (2014), is interested in sustainability attributes that happen early in the production process. Interest in sustainability attributes such as the use of environmentally friendly raw materials or the production process having a relatively low environmental impact shows that consumers care about such BM elements as key partners, resources, or activities that were traditionally not visible to them. The same is apparent in the store experiment, where an environmental focus in

transport and packaging was among the highest ranking sustainability attributes; an attribute that concerns the channels of the BM. Reaching out to interested consumers with such attributes implies moving other BM elements, such as key partners, resources, activities, or channels into the realm of the value proposition. By default, this makes both the BM and the value chain more transparent, which is identified as one possible SBM archetype by Bocken et al. (2014) and a potential source of competitive advantage (Human Rights Watch).

This finding is tightly interconnected with another important aspect of the value proposition—that it contains not only the functional aspects of the offering, but also the articulation of its benefits (Ladd, 2018) and other types of value, such as environmental or social (Ojasalo and Ojasalo, 2018). Traditionally, the value proposition of a physical product has been seen as an offering of use value of that product (goods-dominant logic cf. Vargo and Lusch (2004)). However, most of the sustainability attributes included in the experiment provide no direct use value for the consumer. This indicates that many consumers are interested in multifaceted value propositions that bring value not only to themselves, but also to the environment and other people.

However, it is important to note that sustainability attributes might come at odds with other desirable attributes and few consumers are willing to compromise desired attributes such as quality or functionality for sustainability attributes (Song and Kim, 2018; Tunn et al., 2019). This is highlighted by the fact that sustainability attributes were not ranked as the top attributes in any of the experiments; instead, attributes such as selection, tactile features, or previous positive experiences were. In addition, sustainability attributes were only ranked high for two of the three sample groups. Group GreenL showed very little interest in such attributes. This can pose challenges in crafting desirable value propositions and reaching out with them to the relevant customer segments.

4.2. From consumer preferences to the BM

Firms can leverage the information on consumer preferences for SBM elements through incorporating it back into their BM. If deliberately selected and pursued, the sustainability-oriented consumer segmentation can form the basis for a firm's marketing approach (Ladd, 2018). In addition to creating value propositions that contain the desired sustainability attributes, firms need to promote them, so consumers know they exist and where to find them (Tunn et al., 2019). Hence, firms must work on both the channels for communicating information and delivering the offerings. Together, this points to the importance of a tight integration of three BM elements – customer segments, value proposition, and channels. This supplements the findings of Ladd (2018), who suggested that focusing on just this BM element trio in the nascent stages of business development could improve firms' performance.

Furthermore, through focusing on channels, firms can also reach out to new consumer groups with an untapped demand for sustainability. From the findings, we see that the least sustainability-oriented customers have almost the same ranking of a sustainability attribute, such as the use of environmentally friendly raw materials, as the other segments. Focusing marketing on the sustainability attributes that are most important to the sustainability-oriented customers might therefore have a positive spillover to the less sustainability-oriented customers as well. By playing a proactive role in encouraging sustainable consumer behavior through informing (Glavas and Mish, 2015) and positively directing (Bocken and Allwood, 2012), firms can increase their customer base for sustainable products.

5. Conclusion

There is a need for more sustainable production and consumption practices if we are to move toward a more sustainable future (Druckman and Jackson, 2010). Firms have a role to play through, for instance, changes in their BMs (Tunn et al., 2019). In this article, we contributed to this debate by investigating ways to incorporate knowledge about consumer preferences and sustainable consumption into SBM literature and practice.

On the theoretical side, our research contributes to the SBM literature by informing it with a consumer preference perspective, providing an illustration of how to both elicit consumer preferences for BM elements and integrate consumer preference data into an SBM canvas. SBM literature has had considerable developments when it comes to the supply or production side of the BM (see Bocken et al. (2014) for an overview). However, BMs do not focus solely on the creation of offerings. They are also a link to the larger consumption system in which they operate (Boons and Lüdeke-Freund, 2013). Investigating the consumer aspect of BMs is therefore essential in order to gain a holistic perspective of BMs. Investigating the consumer side of BMs is especially relevant in the context of sustainable business. Recent studies suggest that firms have a role to play in actively encouraging more sustainable consumer behavior (Bocken, 2017; Tunn et al., 2019). To do that, we need more research explicitly investigating the interconnections between a firm's BM and their customers.

When it comes to implications for practice in cleaner production, one of our core findings is that consumers ranked sustainable attributes related to BM elements of key resources, activities, partners, and channels higher than price. For practitioners this implies that consumers are willing to reward sustainable production practices. However, these BM elements traditionally have not been visible to the consumer and reaping the benefits of this consumer interest requires making the BMs more transparent. Our findings also uncovered heterogenous consumer preferences for sustainability attributes, which points to the importance of carefully selecting the attributes of the value proposition that are marketed to the different customer segments.

Firms can contribute to increased sustainable consumption through making purchase of sustainable items easier. We suggest that this can be done through addressing the preferences of different sustainability-oriented consumer segments, including preferences for more BM transparency, and importantly, through selecting suitable channels for communication and purchase. Through making sustainable purchase easier, firms help build demand for sustainable offerings, which in turn can stimulate other firms to turn to more sustainable production practices.

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Paper 2

Translating Sustainable Business Models to Consumers

Viktorija Viciunaite

Abstract

Firms can embed sustainability efforts in business model elements such as key resources, key activities, or key partners. To capitalize on their sustainability efforts, firms must present these efforts in a way that is meaningful to consumers that is–translate them. This study explores how sustainability efforts are translated to consumers on webpages, newsletters, and social media profiles of Norwegian yarn firms. Thematic analysis revealed that the firms avoid business model terminology; instead, they translate their sustainability efforts into product attributes or consequences to consumers, society, or the environment. Some of the most sustainability-focused firms also translate their business model logic–their sustainability goals. This helps legitimate business model decisions that might compromise desired attributes. It can also persuade consumers to not only buy into the firm's offering, but also their sustainability values. Implications of the different strategies for translating firms' sustainability efforts to the consumer domain are discussed.

Keywords: sustainable business models, translation, consumers, apparel

Introduction

Sustainable business model (SBM) research is a prolific, emerging research field (Dentchev et al., 2018; Lüdeke-Freund & Dembek, 2017; Schaltegger, Hansen, & Lüdeke-Freund, 2015). SBMs can be seen as an extension of the traditional business model (BM) (Geissdoerfer, Vladimirova, & Evans, 2018). A BM describes the logic and activities involved in value creation, delivery, and capture in an organization (Magretta, 2002; Osterwalder, Pigneur, & Tucci, 2005; Teece, 2010). SBMs include aspects typically omitted by traditional BMs, such as social and environmental effects of running a business (Stubbs & Cocklin, 2008). In other words, SBMs aim to deliver more multifaceted value to a wider range of stakeholders than do traditional BMs (Bocken, Short, Rana, & Evans, 2013).

A BM spans the production and consumption systems in which it is situated (Boons & Lüdeke-Freund, 2013). The customer or consumer is present in most BM

conceptualizations for practitioners (see, e.g., the BM canvas by Osterwalder and Pigneur (2010)), yet is largely absent from BM research (Ojasalo & Ojasalo, 2018). The consumer aspect, with a few recent exceptions (Bocken, 2017; Bocken & Allwood, 2012; Tunn, Bocken, van den Hende, & Schoormans, 2019; Viciunaite & Alfnes, 2020), has also received scant attention in the SBM literature.

We need a stronger focus on the consumer perspective in SBM research for several reasons. On the most basic level, it is about understanding the demand for a given offering, which is essential for firm survival. This can be particularly challenging for sustainability-oriented firms as research has identified numerous hindrances to sustainable purchase (Connell, 2010; Jacobs, Petersen, Hörisch, & Battenfeld, 2018) that provide an extra threat to their survival. Furthermore, in a move toward a more sustainable future, firms have a role to play in encouraging more sustainable consumption practices (Bocken, 2017; Tunn et al., 2019). This study aims to create more knowledge on the consumer side of SBMs by exploring how firms translate their BM sustainability efforts[i] to consumers.

Translation theory is an approach to understanding how objects (e.g., ideas, concepts, practices) change as they move within and across organizational contexts (Sahlin & Wedlin, 2008; Wæraas & Nielsen, 2016). Promoting the sustainability aspects of a product can be viewed as a translation of BM sustainability efforts to consumers. In essence, to create an offering that has sustainability attributes, firms need to embed sustainability efforts in one or several of their BM elements. However, when promoting the offerings resulting from their sustainability efforts, firms typically do not use terms like key resources, key activities, cost structure, or revenue streams, because they are of little interest or have little meaning to consumers. Rather, the BM sustainability efforts are usually presented in terms of the value that consumers obtain from purchasing the offering.

For example, creating a product that is Global Organic Textile Standard certified in the apparel industry requires sustainability efforts in BM elements such as resources (ecological production of raw materials), activities (environmentally friendly production process and waste treatment), and partners (safe working conditions). However, in the communications with consumers, these efforts are seldom promoted in BM terms, but rather as the value of purchasing ethically and bearing fewer health risks, which is more meaningful to consumers. This change in how BM concepts are presented to an external

audience to make them more meaningful is the kind of change that translation theory elucidates.

This study explores how firms in the Norwegian yarn industry translate their BM sustainability efforts to consumers on their online consumer interface platforms, that is, webpages, social media profiles, and newsletters. Thematic analysis was used to analyze the data. The translation findings are discussed in light of the literature on SBMs and sustainable apparel consumption. The study concludes by outlining the implications for the SBM literature and sustainability-oriented firms.

Literature

Translation Theory

Translation theory is rooted in the understanding that objects (e.g., knowledge, concepts, practices) change as they move across contexts (Sahlin & Wedlin, 2008; Wæraas & Nielsen, 2016). Objects like knowledge have shared meaning in specific communities of knowledge in which they have been created (Bechky, 2003; Pawlowski & Robey, 2004). Due to its situated nature, knowledge from one community might be unintelligible or difficult to adopt in another community. Thus, to share knowledge, transfer is not enough—it has to be transformed, in other words, translated (Bechky, 2003).

Translation occurs when a member of one community of knowledge understands the relevance of knowledge from another community in their world (Bechky, 2003; Pawlowski & Robey, 2004). It involves framing knowledge in a way that is meaningful in the recipient context (Bresman, 2013). To translate knowledge into a different context requires a person to be "multilingual," that is, speaking the "language" of recipients as well as having an understanding of the recipient's potential use of the knowledge (Pawlowski & Robey, 2004).

Translation theory was first applied to SBM research very recently. Ode and Wadin (2019) used it to understand how a BM idea spreads among entrepreneurs in a new market, using the solar energy industry as a case. However, this does not help understand how SBMs can be translated to consumers. To explore that question, we need to look at translation as persuasion.

Translation can center around the pursuit of specific interests, often involving acts of persuasion, trying to convince others to embrace a certain point of view (Wæraas & Nielsen, 2016). To achieve this goal, actors can engage in a variety of tactics or discursive

strategies (Wæraas & Nielsen, 2016). BMs can be used as communication devices aimed at persuading external audiences (Doganova & Eyquem-Renault, 2009; Massa, Tucci, & Afuah, 2017); however, little is known about how BMs or SBMs can be addressed to consumers specifically, with the aim of persuading them to embrace a point of view and buy an offering. Translation theory can be a useful approach to understanding this subject area.

Translating Sustainable Business Models to Consumers

Firms and consumers differ significantly when it comes to their understanding of an offering (Heinonen et al., 2010; Ojasalo & Ojasalo, 2018; Strandvik, Holmlund, & Edvardsson, 2012), and they belong to different communities of knowledge when it comes to BMs. Firms have daily hands-on interaction with their BM, while consumers mainly interact with the value proposition and are often not aware of the rest of the BM required to create and deliver that value proposition. Although this is not necessarily an issue for conventional businesses, it might pose challenges for sustainability-oriented firms.

Sustainability efforts are often costly to the firm and, in industries like apparel, occur in parts of the BM invisible to the consumer. Given that consumers cannot reward efforts they do not know about, firms have to inform consumers about their BM sustainability efforts to be able to capitalize on them. However, that is a challenging task.

Some of the typical hindrances to, for example, sustainable apparel purchase are distrust in a firm's sustainability claims (Darnall, Ji, & Vázquez-Brust, 2018). Todeschini, Cortimiglia, Callegaro-de-Menezes, and Ghezzi (2017) and Tunn et al. (2019) point out that many sustainability-oriented firms fail to convince consumers about the benefits of sustainable apparel products or achieve consumer acceptance for sustainable offerings. Thus, sustainability-oriented firms are faced with the task of not only making their sustainability efforts visible to the consumer but also of doing so persuasively.

People buy goods to obtain the services the goods provide for them (Vargo & Lusch, 2004). The value of the good emerges as it becomes embedded in the consumer's context (Heinonen et al., 2010). Thus, to communicate the value of their sustainability efforts persuasively, firms have to help consumers understand the services that their sustainability efforts can provide in the consumer's context. This requires framing the firm's knowledge regarding BM sustainability efforts in a way that is meaningful in the

consumer's context, in other words, translating them. To explore this problem space, the study focuses on the following research question: *How do firms translate their BM sustainability efforts to consumers to persuade them to buy into their offering?*

Methods

The methodological design of this study is a qualitative explorative case study (Yin, 2014). The case the study focuses on is that of BM sustainability effort translation, and the firms investigated represent embedded units of analysis. The design was chosen because it is suitable for new topic areas (Eisenhardt, 1989) and is useful in addressing "how" questions for exploratory research (Rowley, 2002).

Context

The study is contextualized in the Norwegian yarn industry. The yarn industry can be considered a part of the larger apparel industry, which is one of the dirtiest industries in the world (EcoWatch, 2015). Although handicrafts might seem to have a marginal role in apparel, interest in crafts such as knitting has been growing rapidly among young women (Myzelev, 2009; Stannard & Mullet, 2015). Indeed, a recent survey in Norway revealed that every fourth adult—nearly half of all women—reported that they had knitted something in the last 12 months (Laitala & Klepp, 2018).

Craftspeople in Norway can choose from a wide variety of both Norwegian and foreign yarn brands. Norwegian yarn brands have introduced many new yarns with sustainability attributes in recent years and they make active use of online platforms in their communications with consumers. Together this creates a suitable context to explore how firms translate their BM sustainability efforts to consumers on their online platforms.

Data Collection

Data for the study were collected from Norwegian yarn brands. This included firms that produce in Norway (mainly spinning mills or firms that specialize in hand-dyeing yarn) and firms that have Norway as their main market, but produce or buy the yarn abroad. It did not include farms selling their own produce. The investigated brands constitute the vast majority of yarn brands in Norway. Initially, 26 brands were considered, but eight

were later excluded, either because they had no sustainability-related content, had closed, or did not have recent enough information on their online platforms.

Data were collected from the firm's webpages, social media profiles, and newsletters. Most of the websites also functioned as online shops, which supports the idea that they are aimed at consumers. When investigating their social media profiles (Instagram and Facebook), data were collected over a three-month period (January–March or February–April 2019). Subscriptions to newsletters were made when possible; however, over the course of the study period, only three brands sent out newsletters. Collecting data from multiple sources allows for triangulation of findings, which, in turn, helps address the validity of the findings (Bryman, 2012).

Text, pictures, and videos were collected as data. When deciding which information was relevant for the study, priority was given to direct mentions of sustainability, for example, using terms such as "ecological," "organic," "fair trade," "sustainable," and "environment." In such instances, the relevant segment would be copied together with its surrounding text, for better contextual understanding later in the data analysis process. Potentially sustainability-related data were also collected. For example, many yarn brands had extensive information on product care and maintenance or the race of the animals producing the fiber. Pictures, logos, and videos were also collected when considered relevant, for example, images depicting animal husbandry for the spinning mills that also kept their own animals. Data were compiled in separate Word files for each firm.

Identifying Business Model Sustainability Efforts

In the process of understanding how firms translate their BM sustainability efforts to consumers, a crucial step was to identify the object of translation, namely the BM sustainability efforts. The data collected confirmed that firms did not use BM terminology when communicating their sustainability efforts. However, the sustainability information firms conveyed could be related to their underlying BM elements.

Osterwalder and Pigneur (2010) identify nine BM elements: key partners, key resources, key activities, value proposition, customer segments, customer relationships, channels, cost structure, and revenue streams. When a firm communicates its sustainability efforts to consumers, for example, the use of mechanical treatment of raw material instead of chemical treatment in an effort to reduce the negative environmental

effects of the yarn production process, it can be categorized under key activities of the BM.

Most of the sustainability efforts communicated by firms in the Norwegian yarn industry can be related to the four BM elements of key resources, key activities, key partners, and channels. Although most of the efforts will also affect the cost structure and revenue streams of the firms, the sustainability efforts were not primarily situated in those BM elements. Table 1 provides an overview of firms' sustainability efforts, their underlying BM elements, and examples that illustrate them.

Table 1. The object of translation: BM sustainability efforts and examples.

BM element	Sustainability efforts	Examples
Key resources	Using raw materials whose production has reduced negative environmental effects	Using ecological wool or cotton in yarn production
		Using waste from textile production to make yarn
	Using raw materials from sources that ensure animal welfare	Using non-mulesed* wool Using wool from animals that graze freely
	Using raw materials from sources where producers of the raw material are treated fairly	Raw material producers receive fair wages and have safe working conditions
Key activities	Reducing negative environmental effects of the yarn production process	Reduced or no chemical treatment of raw material or yarn
		Using environmentally friendly dyes or undyed yarn
	Financial support for prosocial causes	Donating part of the income from yarn sales to charitable causes like Save the Children or the Pink Ribbon initiative Employing underprivileged groups
	Local focus**	Producing in Norway**
		Produced only with Norwegian wool**
Key partners	Partnering with suppliers that can provide raw material or yarn with reduced negative environmental effects	Buying Global Organic Textile Standard certified raw materials and/or dyes
	Partnering with suppliers that can ensure high animal welfare	Buying merino wool from farms that do not practice mulesing
	Partnering with suppliers that can ensure fair working conditions for people in the yarn supply chain	Buying Fairtrade-labeled yarn or raw material
	Partnering with organizations that focus on social issues	Collaborating with the Church City Mission to knit and distribute garments to the homeless

Channels	Reduced carbon footprint	Reduced travel distances for raw material or yarn**
	Value chain transparency	Provide tours of the production facilities for consumers**
		Provide extensive information online regarding the production process

* Mulesing is the removal of skin around the breech of a sheep to avoid parasite infection. It is normally done without anesthetic and is considered very painful for the animal. It is one of the main animal welfare issues surrounding merino sheep in countries like Australia.
** For a discussion regarding the sustainability of localism, see the section "The value of localism" under Findings.

Data Analysis

The data collected from firms' webpages, social media profiles, and newsletters were analyzed using thematic analysis, which is a method for capturing patterns across qualitative data sets (Braun, Clarke, Hayfield, & Terry, 2019). Braun et al. (2019) distinguish three types of thematic analysis: a coding reliability approach, a codebook approach, and a reflexive approach. In this study, the reflexive approach is used because in contrast to the other two approaches, it allows for codes and themes to emerge inductively from the data. The analysis followed steps suggested by Braun et al. (2019) and included familiarization with the data, generation of codes, constructing initial themes, reviewing themes, and defining themes.

Familiarization with the data began with data collection and included several readings through the whole data set. Generating codes involved assigning "labels" to chunks of data to help reduce and organize them as well as to gain an overview of the initial trends. The coding was inductive and focused on similarity and contiguity (Maxwell & Chmiel, 2014), but was also guided by the research question and the core concepts used in the study, such as sustainability efforts, BM, translation, and consumer value. In line with Silverman (2014), data from a few selected firms were analyzed first and the emerging codes were applied (and subsequently adjusted if necessary) to new firms to evaluate their suitability for inclusion in the data set.

The next step in the data analysis involved theme construction with a focus on the outcome of translation, in other words, how the BM sustainability efforts were framed to consumers. Theme construction occurred in parallel with a review of the literature on sustainable apparel consumption. This combined process led to the identification of two main strategies to translate BM sustainability efforts as *product attributes* (theme 1 in

Table 2) or as *consequences to consumers, society, or the environment* (theme 2 in Table 2).

In addition, three distinct ways of translating sustainability efforts emerged from the reflexive thematic data analysis: *the value of sustainability*, *the value of localism*, and *uncoordinated sustainability* (themes 3–5 in Table 2). Most firms could be categorized under one of these types of translating, but a few made use of more than one type. The five themes were once again evaluated against the whole data set. Table 2 gives details of the full list of themes, subthemes, and quotation from data sources that illustrate them.

Table 2. Themes, subthemes, and quotes from data sources capturing the outcome of translating BM sustainability efforts to consumers.

Theme	Subtheme	Quotations from data sources
1. Sustainability efforts as product attributes	Pro-social efforts as attributes	This yarn is among the most sustainable cotton yarns you can buy and is both Fairtrade and ecologically certified.
	Pro-environmental efforts as attributes	
2. Sustainability efforts as consequences	Consequences of pro-environmental attributes for consumers	Now you can knit with an easily maintained yarn made from wool with an environmentally friendly superwash treatment.
	Consequences of pro-environmental attributes for the environment	Global Organic Textile Standard certification is your guarantee that the wool comes from ecological sheep farms that adhere to the strictest criteria for ethical animal husbandry and maintenance of animal health and welfare.
	Consequences of pro-social efforts for society	Production of this yarn provides subsistence for families in the poorest areas of Peru. They receive more than the minimum salary and food for the work they do. The project supports education for their children, in order to give them a sustainable foundation for life.
3. The value of sustainability	Sustainability values that guide BM decisions	In addition to being a proper "yarnivore," I am also a biologist and care about protecting the environment. [In the firm I] do whatever I can to make the world a bit cleaner, greener, and nicer.
	Lack of potentially desirable attributes	We have a pallet of fixed colors year after year. We make some changes once in a while, but it is not influenced by [fashion] trends.
	Redefining what is valuable	We want the colors we choose to last. Garments you make from our yarn are of such high quality that they can last several generations, which is what we want. Then we simply cannot have colors that [go out of fashion] in a month
	Tackling the lack of desired attributes	Cotton deteriorates from wash while wool deteriorates from use. It is the exposed parts of a woolen garment like the feet or knees that experience most wear and tear. If you patch those parts, you can extend the lifetime of the garment significantly.
4. The value of localism	Positive consequences of localism for farmers	In particular, we spin wool from endangered sheep breeds as a contribution to increasing value creation for farmers that raise these sheep and thus make them more economically attractive.
	Positive consequences of localism for the environment	Sheep are phenomenal in maintaining cultural landscapes.
	Positive consequences of localism for consumers	The yarn is produced locally by Norwegian spinning mills from sheep that graze in the mountains and on the coast in our barren land. The wool is strong, glossy, and soft.
	Transparency	In 2013, the factory received the status as an Économusée; visitors can join a guided tour through the factory to experience the wool's journey from raw material to a finished product.
5. Uncoordinated sustainability		*This theme emerged from a holistic interpretation of the data; no single short citation captures the absence of systematic sustainability communication.*

Findings

Data analysis revealed that firms did not use BM terminology when communicating to consumers on the internet, neither in general nor when talking about their sustainability efforts. However, it was possible to relate the sustainability effort information to underlying BM elements (see Table 1 and the Identifying Business Model Sustainability Efforts section for more information). This supports the notion that firms engaged in BM sustainability effort translation.

In line with Gauthier and Gilomen (2016), data also showed that firms differed in the extent to which they engaged in sustainability efforts. A few firms had a strong focus on sustainability, with the majority of their offerings reflecting sustainability efforts. However, for many of the firms, yarn with sustainability attributes was only a small part of their overall product assortment. While they demonstrated some sustainability efforts, they were meager compared with their other activities and offerings. To capture this variation accurately, the study uses the term BM sustainable effort translation instead of SBM translation.

Sustainability Efforts as Attributes and Consequences

Data analysis together with investigation of the literature on sustainable apparel consumption led to the emergence of two concepts inspired by the means-end approach to consumer motivation (cf. Gutman (1982)) seen as useful in data interpretation, namely attributes and consequences (themes 1 and 2 in Table 2). The means-end approach is in line with the understanding that consumers buy goods to obtain the services (i.e., consequences) that those goods provide (Vargo & Lusch, 2004) and is therefore suitable to apply to this study.

Pro-environmental efforts usually concerned key activities, key resources, or key partners of the BM. They were often framed as attributes such as having third-party environmental certifications, using ecological raw materials, addressing animal welfare, reducing the amount of chemical treatment, or having an environmentally friendly production process:

> A kind and exclusive cotton yarn that is both ecological and plant dyed. The yarn is dyed with plants that grow naturally in Peru and the whole production process is, of course, environmentally friendly.

Pro-environmental attributes often appeared in conjunction with the consequences they might have for consumers or the environment. Consequences for consumers were listed more often than those for the environment and, similar to findings by Brehmer, Podoynitsyna, and Langerak (2018), centered around the creation of nonfinancial value. Typical examples of consequences for consumers included softness, shine, breathability, or reduced health risks. The few times that consequences for the environment were mentioned, they were framed in less specific terms. The following example illustrates a combination of consequences for both consumers and the environment:

> Dyes are selected according to the strictest ecological standards, which reduces the risk of allergies, illness, and harm to the environment.

Pro-social efforts concerned key partners and key activities of the BM. They were rarely framed as product attributes; as a rule, they were only observed if the yarn had third-party certification, such as the Fairtrade label. Most commonly, pro-social efforts in the sample appeared as consequences for people in the yarn supply chain, or recipients of charitable causes that a firm supported, as the following two examples illustrate:

> [The alpacas we use] live free high up in the Andes and provide livelihoods for many poor small-scale farmers.

> The Pink Ribbon initiative will contribute to increased knowledge about late complications after breast cancer treatment.

Brehmer et al. (2018) also found that prosocial efforts in a BM often took the form of employing or supporting underprivileged groups. However, the yarn firms in this sample stand out from many sustainable apparel firms in that they also supported causes that had nothing to do with yarn production or sales, for example, the Pink Ribbon initiative.

In sum, pro-environmental efforts were typically embedded in BM elements of key activities, resources, and partners and were presented as product attributes with potential positive consequences for consumers or the environment. Pro-social efforts

were embedded in BM elements of key activities or partners and were framed as consequences for people in the yarn supply chain or charitable causes. In addition to the tendency of translating sustainability efforts as attributes and consequences, three types of translation were revealed: the value of sustainability, the value of localism, and uncoordinated sustainability. Although most firms relied on one type of translation, a few made use of two, combining, for example, localism and the value of sustainability or localism and uncoordinated sustainability.

The Value of Sustainability

The first type of translation identified by the thematic analysis was called the value of sustainability (theme 3, Table 2). Five firms[ii] from the sample that had a strong sustainability focus and shared similarities in the way they translated their BM sustainability efforts fell into this category. To persuade consumers to buy into their offerings, they used strategies such as stating their sustainability values and goals openly, linking sustainability efforts to desired consequences for consumers, being open about potential drawbacks of their products, providing ideas on how consumers could deal with those drawbacks, and redefining what is considered as valuable attributes.

Common to all the firms in this category were the clearly stated sustainability values and goals, which the other firms in the sample lacked. Sustainability values and goals are not a part of the BM, if it is viewed strictly as activities of value creation delivery and capture. However, these sustainability values and goals represent a BM logic or frame, within which value creation, delivery, and capture occur. They are the foundational guidelines when making decisions about other elements of the BM, as the following example illustrates:

> In the decisions we make, we ensure that concern for people, animals, and the environment always comes first.

Because sustainability values and goals affect BM decisions, they are also directly linked to the attributes and consequences of an offering. In this way, firms can connect not only sustainability efforts but also sustainability values to positive consequences for consumers. Thus, they can try to persuade consumers to buy into their offering as well as their sustainability-friendly point of view. Disclosing sustainability values and goals was

perhaps even more important when firms discussed a potential lack of consumer value, because it helped legitimate the decisions that led to it:

> Because we wish to preserve as much as possible the natural features of mohair fiber, our yarn has greater variation than "factory" yarn. We view it as a positive thing, since it shows that what you are holding in your hand is in fact a natural product without harmful additives.

In line with Glavas and Mish (2015), the above example shows that sustainability-oriented firms not only work to redefine what is valuable, but also try to help consumers have the same definition of value. Henninger, Alevizou, and Oates (2016) showed that sustainable apparel consumers also engage in this type of rationalization, where perceived costs become benefits.

Each time the potential lack of consumer value was discussed, "solutions" were also presented. The solutions could range from reframing what is considered "good" or "valuable," as in the above example, to suggestions for behavioral practices that would help mitigate the negative effects, as in the following example:

> Wool is a more expensive raw material than cotton and clothes from wool are therefore more expensive to make. Producing wool under safe ethical conditions, without child labor or other abuse of the workforce also affects prices. Nevertheless, using wool does not have to be expensive. One needs fewer garments, and with some patching of areas with the most wear and tear, the garments can be used for a long time.

In sum, firms in this category were translating both their BM sustainability efforts and the underlying logic of their BM (i.e., sustainability values) to persuade consumers to buy into their offering as well as into their point of view. Firms also used their openly stated sustainability values to legitimate their BM decisions, including those leading to a potential lack of desirable attributes. To tackle the issues concerning the loss of desirable attributes and to persuade consumers of the value of the offering, firms worked to reframe the attributes that should be considered valuable. In addition, firms used their knowledge of the benefits of their sustainability efforts together with their understanding of how consumers use their products to provide suggestions to help consumers navigate the drawbacks of their offerings.

The Value of Localism

The second type of translation identified by the analysis was called the value of localism (theme 4, Table 2). Seven firms[iii] from the sample that had a focus on localism (local fiber sourcing, production, and maintaining craftsmanship skills) and shared similarities in the way they translated their BM sustainability efforts fell into this category. These firms engaged in similar persuasion strategies as in "the value of sustainability," but focused on localism specifically, and used very little sustainability terminology. To persuade consumers to buy into their offerings, they highlighted the positive consequences localism could have for consumers, local communities, and the environment, and were transparent about their production processes.

Although the sustainability of localism has been debated (Curtis, 2003; Hess, 2008), it is considered an aspect of slow fashion that in turn is seen as one pathway to more sustainability in the apparel industry (Fletcher, 2010). It is also an example of the "repurpose for society/environment" SBM archetype identified by Bocken, Short, Rana, and Evans (2014). This uncertain relationship between sustainability and localism is reflected in communication through infrequent use of sustainability phrases such as "environmentally friendly" or "sustainable". Rather, firms focused on highlighting the positive consequences of localism. Most firms focused their localism efforts on three BM elements: key resources (local fiber sourcing), key activities (local production), and channels (transparency and reduced travel distances).

To persuade consumers of the benefits of using local wool, firms focused on the positive consequences for the environment, society, or consumers. The potential positive consequences included maintenance of cultural landscapes, conservation of endangered or less common breeds of sheep, reduced transportation, and supporting farmers' livelihoods. Firms also discussed extensively the varying uses that fibers from different local breeds can provide consumers. As in the first type of translation (value of sustainability), a few of the firms indicated potential negative consequences of their offerings, following them up with possible solutions. For example, Norwegian wool can be less attractive to consumers due to its coarseness, which one firm tackled like this:

> Even those with sensitive soft skin need not worry, we have wonderful Norwegian lamb's wool where only the finest wool is used. We also have yarn from Norwegian merino, so there is no reason not to choose weathered Norwegian yarn.

The firms exemplified their local production practices and craftsmanship skills through high levels of transparency. However, their approach to transparency mainly shed light on the production process of yarn, rather than its social or environmental effects. While a strong focus on transparency is in line with the advocated benefits of localism, it has no "utilitarian" value for consumers (Bhaduri & Ha-Brookshire, 2011). However, consumers might be curious about, for example, production practices (Singh & Del Bosque, 2008) and transparency can help firms address legitimacy issues (Carter & Rogers, 2008) and build consumer trust (Glavas & Mish, 2015).

In sum, firms in this category, as in the first type, translated two aspects of their BMs, namely sustainability efforts and logic. However, unlike the first type, here their focus was on localism specifically and not sustainability in general. Through illustrating the positive consequences that localism can have on communities, the environment, and consumers, these firms tried to persuade consumers not only to buy into their offering, but also their passion for localism.

Uncoordinated Sustainability

The last type of translation identified by the analysis was called uncoordinated[iv] sustainability (theme 5, Table 2). Nine brands[v] fell into this category, and these had the weakest focus on sustainability. Yarn resulting from sustainability efforts was only a small part of their overall assortment and sustainability-oriented consumers did not appear to be their main target group.

The translation of the sustainability efforts of these firms could be characterized more by an absence than a presence. For instance, the brands with the fewest sustainability efforts typically only listed them as attributes and not as consequences. For many of these brands, the only identifiable sustainability effort was selling some yarns from non-mulesed sheep wool. However, the firms did not explain what mulesing was, or what the consequences of sourcing non-mulesed sheep wool were, thus missing the opportunity to show how this raw material choice can be meaningful or valuable to consumers.

In contrast to the other two types of translation, firms in this category were persuading consumers only to buy a product, not a sustainability-friendly point of view.

These firms had no sustainability-related value statements, although one of them acknowledged that some of their consumers might have those values:

> [This yarn] is an ecological and ethical yarn concept for those of you who want to enjoy the original properties of wool and those of you who care about health, animal welfare, and the environment.

In sum, firms in this category provided the least sustainability-related information and mainly relied on very basic strategies to persuade consumers to buy an offering rather than adopt a sustainability-friendly point of view.

Discussion

Various scholars have pointed to the need for firms in the apparel industry to clarify and improve their sustainability communication (Connell, 2010; Cowan & Kinley, 2014; Henninger et al., 2016; Jacobs et al., 2018) by highlighting the benefits and added values, including social, environmental, and product-related features (Chan & Wong, 2012; Song & Kim, 2018). This study argues that communicating sustainability information to consumers entails translating BM sustainability efforts and found that firms in the Norwegian yarn industry mainly translated their sustainability efforts as product attributes or consequences for consumers, the environment, or society.

One of the main challenges in conveying sustainability content is its persuasiveness (Henninger et al., 2016). Framing sustainability efforts as product attributes involves a change in the concept as it moves across contexts; however, this does not fulfill the criteria of translation because it does not necessarily create shared understanding of what it means in the consumer's context. Marking a yarn as containing 100% ecological wool describes a BM key resource but says little about what the information means or how it might be used in the consumer domain (cf. Bechky (2003) and Pawlowski and Robey (2004)). The attribute will only be meaningful to consumers who have prior knowledge of the consequences of producing or using ecological wool, which limits its potential of persuasion. Few consumers possess extensive knowledge about the environmental or social effects of the apparel industry, and this can be a hindrance to sustainable purchasing (McNeill & Moore, 2015). Framing BM sustainability efforts as consequences might be one way to overcome this challenge.

A firm's value proposition – its offering – represents not only the functional aspects, but also the articulation of its benefits (Ladd, 2018). Framing the BM sustainability efforts as consequences helps articulate some of the benefits because it immediately reveals the services and uses that the efforts can provide in the consumer domain. This fulfills the criteria of translation in that it shows the relevance of the information in another community's context (Pawlowski & Robey, 2004), and thus may be a more persuasive approach to translating BM sustainability efforts.

In addition to translating BM sustainability efforts as attributes and consequences, data analysis also revealed variation in translation not captured by these two themes. Namely, that firms with a strong focus on sustainability or localism translated not only BM efforts, but also the BM logic of sustainability or localism values and goals. The BM logic helped contextualize and legitimate their BM activities.

For example, one of the common hindrances to sustainable apparel purchase is the trade-off between sustainability and other desirable attributes (Connell, 2010; Henninger et al., 2016). Some of the trade-offs common in apparel, such as between sustainability and attractive designs, are not a threat to firms in the yarn industry, because they sell a material, not a final product. However, as the findings revealed, a loss of desired attributes can still occur. Indeed, some of the firms openly indicated that in trade-off situations where they have to choose between sustainability values and desired attributes, they would prioritize the former.

Although few consumers are willing to compromise desired attributes for sustainability attributes (Song & Kim, 2018; Tunn et al., 2019), sustainability-oriented consumers can engage in rationalizing where costs can become benefits (Lundblad & Davies, 2016). In such a situation, conveying BM logic can serve as a persuasion tactic because it helps consumers understand how and why a negative consequence like the lack of desired attributes occurs, thereby providing them with information to decide if this is a cost they are willing to redefine as a benefit. Furthermore, through informing consumers about both BM sustainability efforts and BM logic, firms were persuading them not only to buy into their offering, but also into their values and goals.

The relationship between values and behaviors is not straightforward in sustainable consumption (Boulstridge & Carrigan, 2000), but numerous theories suggest a potential positive relationship (see, e.g., Ajzen and Fishbein (1977), Schwartz (1977) or

Guagnano, Stern, and Dietz (1995)). If a firm succeeds in persuading consumers also to adopt its point of view, it could be a step in building more demand for its products.

Conclusion

This study set out to explore the SBM–consumer interface by looking at how firms in the Norwegian yarn industry translate their BM sustainability efforts to consumers. Data analysis revealed both similarities and variation in this process. Similar to most firms was the framing of sustainability efforts in terms of product attributes and consequences to consumers, society, or the environment.

The study argued that framing sustainability efforts as consequences rather than simply as attributes might be more meaningful in the consumer domain. Framing sustainability efforts as consequences for various stakeholders is in line with suggestions that firms should be clearer in communicating the social, environmental, and personal benefits that their activities lead to (Jacobs et al., 2018). However, efficiency of translation (Sahlin & Wedlin, 2008) was not the primary focus of the study and warrants its own empirical investigation. Furthermore, future research might investigate how BM sustainability efforts are translated in other industries where consumption involves other risks and benefits, such as food or transport.

Some of the firms in the sample translated not only their BM sustainability efforts, but also their BM logic of either sustainability or localism goals. The BM logic served two purposes. It helped legitimate the lack of potentially desirable attributes caused by sustainability efforts. Furthermore, by communicating the BM logic in addition to BM sustainability efforts, firms were persuading consumers to not only buy into their offering, but also into their values and goals.

On the theoretical side, the study contributes through expanding our understanding of the consumer's side of the SBM. It shows that firms can use their BM as a communication device (Doganova & Eyquem-Renault, 2009) to persuade external audiences such as consumers, through translating their BM activities or logic in terms that are meaningful to the recipients. However, persuasive translation requires firms to understand the potential benefits and services that consumers can gain from their BM sustainability efforts. In line with Ojasalo and Ojasalo (2018), this highlights the importance of having a better understanding of the consumer's world in both BM research and practice.

The study is also an example of the opportunities that lie in cross-fertilization with other research fields. The BM concept proved particularly compatible with translation theory (Sahlin & Wedlin, 2008; Wæraas & Nielsen, 2016), yet these two fields were integrated in an empirical study only very recently (Ode & Wadin, 2019). More research should explore the possibilities that translation theory can provide in understanding BMs and SBMs.

Data analysis drew on the means-end approach (Gutman, 1982), which has been successfully applied to study consumer motivations for sustainable apparel purchase and use (Jägel, Keeling, Reppel, & Gruber, 2012; Lundblad & Davies, 2016). Our study shows that concepts from the means-end approach can also be useful in understanding how firms translate their BM sustainability efforts to consumers.

The findings of this study are also relevant to practitioners. Conveying sustainability information persuasively is seen as a potential pathway to engaging and retaining apparel consumers (Lundblad & Davies, 2016). This study illustrated various strategies that firms can use to translate their BM sustainability efforts to consumers. Specifically, firms should integrate knowledge about how consumers interact with their product by highlighting the positive consequences or services their sustainability efforts provide in the consumer domain. Firms that were found to achieve sustainability goals can communicate this information to contextualize and legitimate their BM decisions to consumers.

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Endnotes:

[i] The study uses BM sustainability effort translation instead of SBM translation because firms (both in general and the ones investigated in this study) vary in the extent to which they embrace sustainability in their BMs. Few firms could be said to have SBMs, and many incorporate some aspect of sustainability in parts of their BM. Thus, the term BM sustainability effort translation captures the empirical world more accurately. See the Findings section for more information.

[ii] One of these firms also made use of "value of localism" translation.

[iii] Among these seven firms, one also made use of "value of sustainability" translation; another two made use of "uncoordinated sustainability."

[iv] The term "uncoordinated" is borrowed from the 2019 report "Pulse of the Fashion Industry" by the Boston Consulting Group. The report uses the term "uncoordinated actions" to describe those firms in the fashion industry that "have yet to commit fully to sustainability and lack a clear strategic direction and corresponding internal structure" (Lehmann et al., 2019, p. 7).

[v] Two of the brands belonged to the same house of brands; another two also made use of "value of localism" translation.

Paper 3

Localizing opportunities in networks: A study of micro-entrepreneurs' embedded learning practices

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Abstract

This paper expands and contextualizes relational perspectives on entrepreneurial learning by considering local embeddedness, a hitherto under-investigated area in entrepreneurship research. Through a qualitative, multiple case study in the creative industries, we investigate how local embeddedness operates through learning in networks in the Norwegian wool industry of micro-entrepreneurs. We explore how micro-entrepreneurs employ locally embedded knowledge and networks to create and legitimize new opportunities. The analysis uncovers four main themes that constitute the main pillars of localized relational entrepreneurial learning: (i) *accessing localized knowledge across spatial contexts*, (ii) *localized co-creation in learning to recognize opportunities*, (iii) *localized opportunity legitimization* and (iv) *moving the knowledge front of localized practice through bridging.* The study contributes by developing content and depth to the concept of localized relational entrepreneurial learning, responding to a placeless discourse in entrepreneurship theory and practice.

Keywords: Relational entrepreneurial learning, networks, local embeddedness, creative industries

Introduction

All entrepreneurial activities are embedded in contexts that can facilitate or constrain entrepreneurial learning (EL) (Welter, 2011; Zahra et al., 2014). This paper expands and contextualizes relational perspectives on EL (El-Awad et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Nieminen and Lemmetyinen, 2015) in the creative industries by drawing attention to local embeddedness (Jack and Anderson, 2002). We explore how local embeddedness unfolds in 'learning to recognise new opportunities' (Rae, 2005: p. 324) in micro-business networks, a hitherto under-investigated area in entrepreneurship research.

EL is a highly contextualized phenomenon (Rae, 2004; Rae, 2005) and the context, with its physical location of the networks and communities in which the entrepreneurs

are embedded, can enable and constrain resource access and opportunities (McKeever et al., 2015; Müller and Korsgaard, 2018). Rae (2004) argued that the emergence of a business is negotiated through multiple social relations and exchanges within contexts and industries. Taking such a contextual and embedded stance to EL demands that our attention must be directed towards exploring entrepreneurial practice (Chalmers and Shaw, 2017; Cope and Down, 2010), including acknowledging that entrepreneurs' opportunity recognition is a result of contextual learning in networks immersed in industries (Korsgaard and Anderson, 2011; Lefebvre et al., 2015; Müller, 2016; Rae, 2004).

Recently, Müller and Korsgaard (2018) found local embeddedness to be of high value in the rural entrepreneur's entrepreneurial process. Local embeddedness can be understood as the nature, depth, and extent of the entrepreneur's ties into a local environment (Jack and Anderson, 2002). In this study, we extend these insights further through employing a socially situated learning lens (Lefebvre et al., 2015; Rae, 2004, 2005, 2017) to the study of relational embedded learning practices in the creative industries. Entrepreneurial thinking is increasingly being embraced by the smallest businesses in the creative and craft-based industries, which are among the fastest growing sectors in the economy (Schulte-Holthaus, 2018). Recent studies have also pointed to the importance of creative and craft-based products as a growth engine for urban development, enhancing the competitiveness and resilience of local actors in larger dominant markets (Korsgaard et al., 2015; Müller and Korsgaard, 2018; Rentschler et al., 2018; Teixeira and Ferreira, 2019; Verhaal et al., 2017).

The creative sector represents an intriguing research context for embedded studies, because creative entrepreneurs are particularly dependent on their networks (Shaw et al., 2017). Previous research has demonstrated the collaborative networking practices evident among such actors (Daskalaki, 2010; Dodd, 2014; Lee, 2015; Pick et al., 2015; Pret et al., 2016) which stands in contrast to other more dominant and competitive industries (Chalmers and Shaw, 2017). Typically, they would employ a means driven co-creation process (Sarasvathy, 2001), employing existing means and networks to creatively build new markets (Lehman et al., 2014).

On the one hand, as many entrepreneurs in this sector are micro-entrepreneurs, they often face numerous constraints related to resources, skill development and infrastructure (Cunningham, 2011) that impede their learning and development. On the

other hand, local embeddedness stimulates entrepreneurial activity despite such resource constraints, because entrepreneurs can use local resources and networks available in rural areas (Alsos et al., 2014; Korsgaard et al., 2015; Müller and Korsgaard, 2018).

Research on embedded learning experiences between different actors is still in its infancy in the EL literature (Cantino et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Soetanto, 2017). Despite their evident importance, EL frameworks and research are usually conceptualized as mostly individual oriented, with scant attention paid to the contextual and spatial dynamics within which EL takes place. Furthermore, Shaw et al. (2017) argued for deeper insights into small firm networks' embedding processes and that the role of entrepreneurial agency in embedding is yet under-explored. We aim to address these gaps through a multiple, in-depth case study of sustainability-oriented micro-entrepreneurs in the context of the Norwegian wool industry. As single micro-entrepreneurs, they undertake localized embedded activities and possess know-how related to animal breeding, the use of local raw materials and local production practices. However, we know less about how local embeddedness operates through learning in the networks of micro-entrepreneurs and how they employ locally-embedded knowledge to create new opportunities.

The entrepreneurial process in this study is studied from a process-relational perspective. In line with Chalmers and Shaw (2017), who argued for a contextualized and practice-based approach, we focus on entrepreneurs' network-based learning while *driving* the market (Schindehutte et al., 2008) for local wool in a more sustainable direction within their industries. These creative entrepreneurs challenge established industry practices and work relationally as pioneers to make the industry more sustainable (Hall et al., 2010; Hockerts and Wüstenhagen, 2010). We use the situated and social perspective to EL (Lefebvre et al., 2015; Rae, 2004, 2005, 2017) and the concept of local embeddedness (Jack and Anderson, 2002) to frame our study and analysis. To gain a comprehensive contextual understanding of our findings within the creative industries, we followed the entrepreneurs over a period of three years, making it possible to both gain deep insights and advance our conceptual understanding of local embeddedness and how it operates through the lens of network-based, situated learning.

The remainder of the paper is structured as follows. First, we develop a conceptual backdrop grounded in a review of the EL literature on creative industries and local

embeddedness to situate our research. We then outline our methodology and findings, before discussing them in light of our theoretical framework. We conclude by outlining our contributions and suggest what implications our study may have for theory and practice.

Theoretical framework

Entrepreneurial learning in the creative industries

EL during the last decade has established itself as an important stream of entrepreneurship research (Pittaway and Thorpe, 2012; Wang and Chugh, 2014). The social and situated learning experiences of teams and networks have only recently gained empirical attention within the EL literature (El-Awad et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Nieminen and Lemmetyinen, 2015). There is a particular value in social forms of EL as the entrepreneur in a small and creative business often lacks the experience and knowledge to thrive in business development alone (Cope, 2003, 2005; Politis, 2005). Hence, entrepreneurs benefit from learning through forming relationships and networks with relevant actors in their entrepreneurial milieu (Lefebvre et al., 2015; Soetanto, 2017; Taylor and Thorpe, 2004).

Micro firms in the creative industries also tend to suffer from resource constraints and, thus, are reliant on accessing a broader pool of knowledge to enhance their entrepreneurial agency (Kingsley and Malecki, 2004). Research has uncovered EL within these industries to be highly collaborative and network-based (Lee, 2015; Rae, 2004, 2005; Raffo et al., 2000a; Raffo et al., 2000b). Informal networks (Kingsley and Malecki, 2004; Lee, 2015; Raffo et al., 2000a), immersion in the industry (Rae, 2004; Rae, 2005) and mentoring (Raffo et al., 2000b) are important enablers in accessing operant resources, knowledge and skills among creative entrepreneurs.

Furthermore, creative and innovation-related knowledge is typically tacit and is best transferred through direct interaction (Bathelt and Glückler, 2011). Creative entrepreneurs specifically find little use for traditional educational approaches in learning entrepreneurship (Kuhn and Galloway, 2015; Raffo et al., 2000a; Raffo et al., 2000b) as it is too removed from the daily practice of their industry. Instead, Rae (2004, 2005) illustrated how entrepreneurs can learn to recognize opportunities through hands-on industry-situated learning experiences, such as in an informal community of practice (Lave and Wenger, 1991) where they solve real-time context-specific problems

together. Learning in networks is, therefore, relevant for small micro-businesses in the creative sector, because it can be a low-cost and community-based practice to develop opportunities, gain legitimacy and solve joint problems (Elfring and Hulsink, 2003; Soetanto, 2017).

Local embeddedness as an enabler of entrepreneurial learning

For a long time, the prevailing view of entrepreneurship has been to regard this purely as an economic and profit-maximizing activity (Davidsson et al., 2006). This emphasis on competitive logics has increasingly detached not only regional products but also the value of places and local practices, and made them interchangeable and less relevant (Horlings and Marsden, 2014). Granovetter (1985) criticized researchers for such an 'uncersocialised conception' (p. 483) of economic activities, paying too little attention to the context in which economic activities occur and the social interactions enabling exchanges between economic actors. In the entrepreneurship scholarly literature, there is an ongoing movement towards conceptualizing entrepreneurship as a result of socialized and collaborative achievements (McKeever et al., 2015). The relationship between the entrepreneur and the context is explained through the concept of embeddedness (Granovetter, 1985; Jack and Anderson, 2002). Embeddedness is a concept that conceives the social structure on how the operating institutional, social context and community influence perceived entrepreneurial opportunities in particular situations (McKeever et al., 2015; Welter, 2011; Welter and Smallbone, 2011). Thus, the entrepreneurs' embeddedness may enable or constrain entrepreneurial opportunities. For example, immigrant entrepreneurs are embedded both in their local business context in the host country as well as in their country of origin, reflecting a 'mixed embeddedness', which both enables and constrains their entrepreneurial endeavours (Kloosterman, 2010).

Numerous studies illustrate the benefits of local embeddedness, which encompasses access to local resources, tacit knowledge and community support (Alsos et al., 2003, 2014; Anderson, 2000; Jarl Borch et al., 2008; Korsgaard et al., 2015; Müller and Korsgaard, 2018). Local embeddedness allows entrepreneurs access to place specific local structures that anchor the entrepreneur in the local context giving them access to specialized knowledge not found elsewhere (Jack and Anderson, 2002), such as artisan or handicraft knowledge. Anderson's (2000) seminal research illustrates how rural

entrepreneurs commodify such specific intangible and often redundant peripheral resources. Rae (2017) showed how peripherality enables EL to offer new insights, innovations and opportunities of shared value between actors. Several studies have focused on place specific and local resource mobilization in the rural entrepreneurship domain (Alsos et al., 2014; Korsgaard et al., 2015; Müller and Korsgaard, 2018). Alsos and colleagues (2003, 2014) demonstrated the importance of farm-based resources in generating increased value in a particular region, as the local network and the local knowledge that the farm-based entrepreneur has gained through traditional agriculture can stimulate entrepreneurship outside their farms (Alsos et al., 2003). However, we neither know much about how local embeddedness operates through the day-to-day EL practices, nor do we have insights into the dimensionality of embedded EL among a community of creative entrepreneurs working towards a shared goal. Consequently, local embeddedness emphasizes the importance of the social in shaping EL practices. This research is putting localized practices back in, through investigating the role of local embeddedness in EL in networks. We are interested in how creative micro-entrepreneurs increase their local embeddedness through networking and how learning to recognize opportunities is enabled through localized networking practices. The research question we put forward is: *How do creative micro-entrepreneurs learn to identify opportunities from locally embedded knowledge and networks?*

Research design and methodology

A multiple, in-depth case study design was chosen as the appropriate research strategy on account of its applicability for investigating a contemporary phenomenon in its real-life context emerging over time (Simons, 2009; Yin, 2014). We focused on the phenomenon of localized relational EL in the Norwegian wool industry, with the sustainability-oriented micro-businesses representing the units of analysis. This research strategy gave us the unique opportunity to compare findings across the embedded units and theorize on interesting dimensions across cases.

The analysis focused on how the entrepreneurs learn with and from local networks, seen in retrospect, focusing on seminal events in their learning trajectories. We employed an abductive approach, using a mix of deduction and induction with prior understanding and theory development within the field (Tavory and Timmermans, 2014; Thagaard, 2013).

As entrepreneurs' practices are crucial to EL, we argue that a contextual research approach would benefit and advance further conceptualizations of these, because our research approach is grounded in understanding what entrepreneurs actually do in their daily practice (Cope and Down, 2010; Chalmers and Shaw, 2017). This research strategy allowed us a closeness to the phenomenon that made it possible to abstract meaningful patterns from the lived experiences of entrepreneurs and, therefore, allowed for theory development grounded in actual practice (Eisenhardt, 1989; Flyvbjerg, 2006).

To gain a comprehensive contextual understanding of our findings within this particular industry, we followed the entrepreneurs over a period of three years (2015–2018) by taking part in eight industry-relevant network events as participant observers (the annual Wool Day, Oslo Knitting Festival and Oslo Design Fair). This immersion altogether includes 195 hours of observations. Through a deep immersion and insider view in this industry (Rae, 2004), we could more easily understand the context for learning in networks, which contributes to increase the validity of our findings. This provided us with highly relevant and well-founded information about the industry and the entrepreneurs over a prolonged time span. This embedded strategy enabled a closeness to the research phenomenon ensuring that the analytical conceptualizations from our data were validated up against our observations, which made it possible to identify contextualized, theoretically meaningful patterns (Eisenhardt, 1989; Flyvbjerg, 2006).

Our primary data sources are: (i) semi-structured and retrospective interviews (with individuals as well as focus groups) involving 10 micro-entrepreneurs/co-entrepreneurs and (ii) audio recordings from a café dialogue (Brown and Isaacs, 2005) from a one-day business development workshop we arranged for the micro-entrepreneurs in October 2017.

As critical incidents are central to EL, our interviews were inspired by the critical incident technique, which originates from Flanagan (1954), and has been employed by other EL researchers (Cope and Watts, 2000; Man, 2006; Mulder et al., 2007). We were probing for seminal events from networking in which the entrepreneurs could recall having learnt something of significant importance for their business.

Semi-structured interviews offer more flexibility to move back and forth between themes and questions as the informant reflects on their learning and relationships. Moreover, the focus group interviews were particularly effective for capturing the

relational dimensions, because they stimulated meta-reflection caused by group dynamics (Morgan, 2002). During the interviews, we focused on the entrepreneur's learning experiences with and from their local networks in opportunity development, drawing attention to the local knowledge and practices inherent in these experiences, and how they build and use their networks in learning practices, as well as challenges in those activities. All interviews were audio recorded, digitally stored and fully transcribed.

Research context

The wool industry in Norway represents various small and medium-sized enterprises offering wool products, including yarn, textiles and apparel items. The industry consists of a few larger actors (up to 100 employees) and many entrepreneurial micro-businesses. Within the last 5–10 years, a movement towards more sustainable production practices favouring local production has been paving its way in the Norwegian wool industry (Klepp et al., 2016; Klepp and Laitala, 2018). The smallest businesses are taking a leading role in this movement, inadvertently challenging established industry practices (Schindehutte et al., 2008). We focus on this select group of sustainability-oriented niche market players, who have an interest in integrating sustainability and local production into their products and business models (Hall et al., 2010). The research is motivated by the call in the KRUS project—'Enhancing local wool value chains in Norway' (OsloMet).

These creative entrepreneurs present a suitable context for studying EL and local embeddedness for several reasons. First, they have unique multifaceted local embeddedness. They share a passion for local wool fibre, craftsmanship and production, yet geographically they are quite dispersed around Norway. They have an interest in the local wool fibre both because it represents traditional 'slow' craftsmanship, because of its physical features, and because of the role animal husbandry has had in Norwegian culture and cultural landscapes.

Another interesting aspect is that the entrepreneurs share an emotional place attachment, irrespective of where they are located. In fact, this shared passion for local fibre and craftsmanship was what led many of them to get to know each other and try to work together despite the geographical distance separating them. This shared passion represents an emotional place attachment (cf. Kibler et al., 2015), a place embeddedness rooted in caring about a place. Interestingly, the 'place' in this case represents not a specific small area, but rather anywhere in Norway where sheep husbandry or wool

craftsmanship takes place. This change of scale in 'localness' is perhaps not surprising in the context of the wool industry, which is otherwise highly globalized.

Data sources, selection criteria and entrepreneur sample

The cases were selected through an expert sampling strategy (Neergaard, 2007), in which we conducted two expert interviews with a lead researcher and author of several books about the Norwegian wool industry. This researcher was able to offer us a comprehensive overview of all relevant actors in the industry. As our primary focus was on the smallest actors—micro-businesses with 10 or fewer employees, including the owner-manager (Jaouen and Lasch, 2015)—it was relatively straightforward to obtain an overview of potential candidates for interviews. They represent different businesses along the Norwegian wool value chain, such as spinning, fabric production and design studios, as well as independent creative entrepreneurs relying on local wool for their production. Some of the micro-businesses are located in rural areas in different parts of Norway (five of the cases). They also exhibit a more anchored place embeddedness in addition to an emotional place attachment, and the rest of the sample (three cases) is represented by micro-businesses with a non-rural residence, yet local emotional attachment to localized knowledge and practices, as well as reliance on local sourcing and value chain cooperation.

In total, eight micro-businesses were included, and some of the founder-managers were interviewed multiple times to follow up on interesting opportunity developments. Due to the small number of available micro-entrepreneurs, we anonymized the sample by giving the participants pseudonyms. For details of the sample and data sources, see Table 1.

Table 1. Sample of micro-entrepreneurs.

Entrepreneur	Founding year	Number of employees including founder-manager	Core activities, products and services	Location	Data sources
Linda	2015	1	Design and production of garments. Focus on sustainable and local material sourcing and local production.	Situated in a large Norwegian city	Interview (50 min) in 2017 at a trade fair.
Åsa and Helene	2008	5	Spinning of fibres for self and for hire; sales. Focus on sustainable breeding, raw material sourcing and local production.	Situated in a rural district in the southern part of Norway	One day on-site visit and an interview (59 min) in 2017.
Sigrid	2010	3	Spinning of fibres for self and for hire; sales; courses. Focus on sustainable breeding, raw material sourcing and local production.	Situated in a rural district in mid Norway	One day on-site visit and an interview (116 min) in 2016; phone interview (33 min) in 2017; audio data from café dialogue (55 minutes); focus group interview (79 min) in 2017.
Merete and Martin	2015	2	Co-creation and sale of locally sourced and produced garments. Exploring the possibilities for sustainability in interior design and architecture.	Situated in a coastal rural district of northern Norway	Audio data from café dialogue (55 min); focus group interviews (77 and 79 min) in 2017.
Hans	2014	1	Co-creation, production and sale of locally sourced and produced garments.	Situated in a coastal rural district of western Norway	Audio data from café dialogue (55 min); focus group interview (77 min) in 2017.
Berit	2015	1	Spinning; sales. Focus on sustainable breeding and local production.	Situated in a rural district in southern Norway	Audio data from café dialogue (55 min); focus group interview (79 min) in 2017.

Siri	2016	1	Dyeing and sale of yarn; courses. Focus on sustainable sourcing and local production.	Situated in a large Norwegian city	Audio data from café dialogue (55 min); focus group interview (77 min) in 2017.
Trine	2007	1	Import and sale of sustainable insulation materials. Experimenting currently with the use of local wool as an insulation material in construction.	Situated in a large Norwegian city	Audio data from café dialogue (55 min); focus group interview (79 min) in 2017.

Data analysis process

First, the researchers read the transcripts and coded them. We followed and combined the thematic analysis, as described by Braun and Clarke (2006) and Gioia et al. (2013). The coding process involved a step-by-step method to enhance the transparency and transferability of our analytical procedure. An initial set of broad codes drawn from the theoretical framework were developed as a backdrop for subsequent coding and included the following themes: use of local knowledge and networks in daily practice, use of local knowledge and networks in opportunity recognition, relational embedded learning practices and influential and unexpected events from localized networking practices.

In the first round of initial coding, data were coded in accordance to the broad categories in the initial list. In this process, we marked, discussed and compared across the research team to address reliability and content validity. Then, individual and independent open and inductive coding was performed to develop the first order codes. We looked for similarities and differences to differentiate between the emerging categories and searched for deeper meaning and relational structure within our data material as the themes emerged (Gioia et al., 2013).

In the next stage, we moved iteratively between second-order themes and third-order themes, continually comparing, contrasting and discussing the findings, until consensus was reached about the third-order themes. We then returned to consult the entire dataset, including attending to our observations for contextualizing our findings, to see whether our final patterns reflected the main structures and depth of our data materials and provided answers to our research question. In the subsequent findings chapter, we illustrate four third-order themes through selected quotes from the

narratives. Appendix 1 also illustrates the process giving rise to the first-order codes and second-order themes consistent with Corley and Gioia (2004) which provides additional empirical evidence to substantiate our aggregate dimensions that we present below.

Findings

In this section, mirroring our empirical investigation, we present how local embeddedness operates through EL in networks of creative micro-entrepreneurs. In the following subsections, we present four main themes of locally-embedded learning practices: *accessing embedded localized knowledge, localized co-creation in learning to recognize opportunities, localized opportunity legitimization* and *moving the knowledge front of localized practice through bridging.* We complement our findings with illustrative narratives to validate the main themes emerging from our analysis.

Accessing embedded localized knowledge

It is seldom that creative niche entrepreneurs have all the necessary networks and resources within their reach. Most often, artisan knowledge and production are categorized as spatially bound and localized resources (Müller and Korsgaard, 2018), and three of our sample of sustainable entrepreneurs have a non-rural residence. Consequently, their ambition to use locally-produced wool makes them seek out localized and artisan embedded knowledge about sourcing, production and, particularly, spinning of yarn qualities. In our analysis, we found that the entrepreneurs increase their access to localized knowledge across spatial contexts in primarily two ways, reflected in the sub-themes: *expanding the localized knowledge pool* and *developing a localized practice community of fellow peers*. Regarding the first sub-theme, the entrepreneurs employ practices that expand their horizons of localized knowledge, for instance by travelling around on informal site visits in rural districts of Norway to collect and build their own customized network. Regarding the second sub-theme, the entrepreneurs increase reciprocal commitment in their local network of new relations through practicing open sharing of what they know and working informally together in a joint learning practice to assist each other. The citation below illustrates the transfer of localized knowledge about hand spinning to another local spinning actor (Åsa and Helene) with the reciprocal benefits it offered:

> It was actually very nice because it became an exchange of experience, when we were first there. We knew very little, but we were good hand-spinners so we knew a lot about yarn in advance. We could begin discussing it with them already from the start, and as a result they saw that perhaps they could have some use from us as well (Sigrid).

In line with Marcketti et al. (2006), some of the micro-entrepreneurs leveraged their resource pool of new local relations in *apprenticeship* like activities, working alongside in practice through vicarious learning:

> Some of the original network also took part in learning how to, for example, run a spinning mill. We did job training at Åsa and Helene's spinning mill together. We were a group that spent a week down there, bothering them and then suddenly their spinning mill became a very important partner in our network afterwards (Sigrid).

The aspect of vicarious learning and informal apprenticeships found aligns with recent research showing that entrepreneurs of small businesses may not be willing to or do not have the resources to acquire professional advice (Kuhn and Galloway, 2015). Moreover, rural areas where the wool actors most often have their production facilities do not provide opportunities for formal training activities (Müller and Korsgaard, 2018). Close informal knowledge relationships may ultimately provide new opportunities that benefit both parties through reciprocal learning for joint benefits (Kuhn and Galloway, 2015). Moreover, relying on informal mentor peers with localized knowledge helps in gaining new craftsmanship skills or knowledge, resonating with previous research showing that entrepreneurs, particularly in creative sectors, learn best by 'doing' and working informally together with more competent peers within their own industry sector (Kuhn and Galloway, 2015; Raffo et al., 2000b).

From our analysis, it is evident that the micro-entrepreneurs as a group create their own knowledge pool of localized practices, which resemble an informal community with a shared practice repertoire working towards a common goal (Lave and Wenger, 1991), where there exists a legitimate 'space' for the actors to learn from each other. Through these practices they transfer and make localized embedded knowledge accessible in the network of peers, even for those who do not have a rural residence, contributing to moving localized knowledge across spatial contexts and between actors. Through these practices they embed themselves more efficiently into local production and establish

reciprocal, long-term, yet informal relationships with local actors around the country—creating a resource pool of like-minded people.

Localized co-creation in learning to recognize opportunities

Local embeddedness lays the ground for learning about local sourcing and production, new crafts and know-how amongst the small-scale wool industry actors. By being active in participating in social networking within the local small-scale wool industry, creative entrepreneurs learn to recognize new opportunities through contextual learning combining localized evolving experiences and new discoveries (Rae, 2004). Through our analysis, we discovered two underlying sub-themes of localized co-creation that the actors use*: local production as the guiding norm* and *a value-based and means-driven local approach to co-creation*. Regarding the first sub-theme, a commonly held norm for establishing close relations among actors was that these sustainability-oriented entrepreneurs were interested in maintaining a local and transparent value chain based upon local, place-specific and heritage resources to create a certain culture in the small-scale industry:

> It's nice if we have the same 'investment ideology' when [we] approach someone in Norway, we are stronger together… the point is to approach other small firms [based on] an interest in climate, it is a culture that has emerged (Martin).

Regarding the second sub-theme, we found an intriguing nuance to localized opportunity co-creation, namely that the entrepreneurs seem to put to the forefront that co-creation with other locally-oriented entrepreneurs is more important than the actual end product, illustrated by Merete reflecting back and telling her story of starting off with a wool knitted sweater where she was looking for a local producer of Norwegian wood for the material to the buttons and ended up with a completely different product. Even though entrepreneurs often do not know their own exact goals (Engel et al., 2017), our sustainability-oriented entrepreneurs are driven by a value-based, yet means-driven (Sarasvathy, 2001), approach when driving opportunity creation forward. Thus, their co-creation process was driven by sustainability as a compass when interacting with others.

As our analysis shows that the entrepreneurs typically 'immersed themselves within the industry' (Rae, 2005: 328), but this networking behaviour was not necessarily

geared towards problem solving or responding to external threats (Soetanto, 2017). Often, it was driven by a strong interest in something they were passionate about and believed in. Their value-based local networking approach again opened up the possibility for unexpected events and discoveries (Burt, 2004) to occur:

> I met a sheep farmer who has sheep of [a local endangered species]. It was a completely random meeting, since I had a sales stand at [a local market] and she just came over to me as a customer and we began chatting. As we talked, she said she had sheep, and I have angora rabbits. She said she didn't know what to do with the spring wool, so I replied, 'It's probably nice to mix it with rabbit wool'. All of a sudden, and by pure coincidence, I got a new product (Berit).

In line with effectual thinking (Sarasvathy, 2001), contingencies from local networking were welcomed by our entrepreneurs as inspiring sources of new unique products, i.e., offering possibilities for new localized entrepreneurial knowledge (Politis, 2005).

Localized opportunity legitimization

Earlier studies have shown that local embeddedness might enhance entrepreneurial activity despite resource constraints, because rural districts offer other advantages such as natural amenities and local networks beyond the venture (Alsos et al., 2014; Korsgaard et al., 2015), and that rural entrepreneurs would typically use local resources first, before going non-locally for new knowledge (Korsgaard et al., 2015). In line with these previous studies, we discovered variability in the degree to which entrepreneurs leveraged, particularly, local networks to legitimize themselves as locally- and sustainably-oriented entrepreneurs, because they are all creative businesses that draw upon local sourcing in their value chains. We elaborate on the notion of this gradient of localized legitimization below through three sub-themes.

At *level one of embedding*, consistent with Wood and McKinley (2010), are examples of using local networks to test the viability of an opportunity to get it formally accepted among the local peer network, a commonly employed practice of non-local resident entrepreneurs:

> I've made contact with very many of those I think are good to have in my network, such as other spinning mills, other hand dyers, The Norwegian Folk Art and Craft Association. I tend to be quite

> independent in idea development… but I use my network, I test my thoughts and ideas on anyone I come across really (Siri).

As this learning account demonstrates, the entrepreneur is here learning from other locally anchored actors and peers within the wool industry as an external source of affirmation and sensemaking before she pursues it further.

At *level two of embedding*, consistent with Rae (2004), we found that entrepreneurs used cultural participation in developing their businesses, and, typically, more deeply engaged local and existing relations (friends, existing customers, fellow peers) to establish strategic support to start enacting the opportunity (Wood and McKinley, 2010). While Korsgaard et al. (2015) found that rural in-migrant entrepreneurs go non-locally to market and strategically position their products to new relations, we found that some of our entrepreneurs (Hans, Sigrid, Merete), in an early phase of their EL, gathered support for their opportunities from local customers or peer networks as a test market to reduce entrepreneurial uncertainty and increase their legitimacy (Politis, 2005) locally:

> Nobody else was doing anything like this, so my way of developing a product is to find a target group that I know and just use them… (Hans).

This learning account demonstrates that Hans, who moved back to his original home, a small town with typical mountain hiking activities, used his local friends who were sports enthusiasts to gather support for his idea, and in fact localized the opportunity through the distinctive cultural identity of outdoor activities, which is uniquely tied to this part of Norway and also an advantage that could be leveraged more strategically when bridging to larger non-local markets. This is even evident through Hans' tagline for his wool product: 'Made in line with nature, out of nature, for use in nature'.

At *level three of embedding*, we found that in Sigrid's case, one might in fact commit the local network directly to enable the start of the business, to create a sense of local ownership among local networks. Later, she also decided to initiate a crowd-funding campaign among local customers in order to be able to expand the production facilities. Through being locally anchored to the place and market, she could claim legitimacy to secure pre-commitment from her local network of customers. Interestingly, she was an

in-migrant local entrepreneur, but she decided to move to a local place and establish a business. She had already established level-one embedding and had a background in sheep breeding (high domain legitimacy).

This trajectory of embedding illustrates to what extent entrepreneurs leverage local networks as the available mean set (Engel et al., 2017; Sarasvathy, 2001) in legitimizing their opportunities and businesses. This is interesting, as effectuation theory does not discuss whether the entrepreneur is efficiently embedded in his/her context. As the entrepreneurs aimed at establishing local partnerships and were all reliant on local raw materials and production, they have learnt to embed their offerings locally, though to varying degrees, using local networks, including strategic resources as local customers, which extends the findings of Korsgaard et al. (2015), as to demonstrate how local embedding might operate through different facets of the entrepreneurial process.

Moving the knowledge front of embedded localized practice through bridging

The dominant players within the mainstream wool industry embody institutionalized industrial knowledge at the dominant knowledge centre, quite separate from the knowledge developed in the local network of micro-entrepreneurs adopting traditional and more localized practices connected to ancient wool breeds and wild sheep. Our analysis revealed two underlying sub-dimensions of this learning practice: *using 'smallness' and 'otherness' in bridging to mainstream actors* and *legitimate 'peripheral-central' localized knowledge transfer*.

With respect to the first theme, it was evident that the creative entrepreneurs used their 'liability of newness' (Politis, 2005) and 'otherness' (Anderson, 2000) as an asset to bridge relationally to the dominant industry actors. Being something out of the ordinary, they easily stimulated the larger actors' hospitality and they were not perceived as possible competitors to the more dominant industry:

> We've also visited [a larger wool factory] and have had a dialog with them; we are so small that we do not pose a threat to the big spinning mills…And anyway, perhaps they can also learn something from our way of making things and our views (Åsa).

The micro-entrepreneurs are situated in the small-scale sector of the wool at the periphery of the more dominant wool actors, aiming to develop opportunities for

themselves and their peers and, as such, appearing like a community phenomenon (Anderson and Gaddefors, 2016). Similar to the findings in Rae (2017), it was evident that the entrepreneurs aimed beyond a marginalized role as niche players; thus, our second theme reflects the bridging to dominant wool actors through transferring localized and tacit knowledge to the mainstream, allowing for access to the centre and potential opportunities and shared knowledge creation with other more dominant actors, as illustrated in this learning narrative:

> We discuss fibre all the time; [a dominant spinning mill] were quite surprised when they were going to spin [a yarn from ancient wool] when they suddenly discovered how different the various sheep races are in spinning, even if they look the same. They discovered that the three races we were spinning in the project looked the same, were classified the same, but it was a black, a grey and a white sheep from three different races. They behaved very differently in spinning (Sigrid).

Rae (2017), relying on Wenger's (1998) discourse of peripherality, discusses the connectedness and peripherality of remote and loosely connected entrepreneurs, such as in our sample. The norm evident from our analysis is that the entrepreneurs seem to work from the periphery of localized small production towards the mainstream centre (industrialized practices), as in the notion of legitimate peripheral participation. Thus, the micro-entrepreneurs' relational bridging to their respective mainstream actors moves the knowledge front of localized practice into the sphere of mainstream knowledge, offering more dominant actors' new perspectives and creative ideas, not readily available in their own knowledge corridor (Politis, 2005; Shane, 2000). Ultimately, the niche players become more attractive as collaborators and can have a say in developing new standards for the use of for instance local wool in architecture and construction, illustrated in this narrative of the employment of local wool knowledge gained from local networking:

> It was very scary to have to build a network from scratch. But now we can take a lot of the network we have established in this little wool collection network back into the construction industry, where we can hopefully utilise it a bit differently, and now maybe with a little more experience, a little more 'weight' than what we did a couple of years ago (Merete).

These two exemplars reveal bridging to the mainstream as vital not only in increasing their own resource base and skills (Korsgaard et al., 2015), but, more importantly, also as a means to legitimate the local wool industry into the mainstream through 'legitimate "peripheral-central" cross-boundary participation' (Rae, 2017: p. 499). But sometimes if bridging to the mainstream industry is too challenging, one can more efficiently bridge by using a broker to try to influence and legitimate a new standard, here reflected by Trine's learning account from trying to mobilize changes in the conservative construction industry through her sustainable insulation wool products:

> At that time, the Norwegian market was not ready for environmental concerns in construction. I was seen as a weird green aunt. The construction industry is so big, there are many large actors that would rather just have you out of the way. And I have a totally different 'theory' on how a house should be built… So [in my network] I've had an advisory office for people who want to repair old houses and buildings (Trine).

While ideas and new opportunities can be generated at the micro-level, mainstream recognition through relational bridging seemed necessary, embedding dominant actors into localized practices and know-how, ultimately bringing the micro-entrepreneurs closer to their vision of more sustainable industrial practices.

Discussion

As pointed out in related studies of growing firms (Anderson et al., 2010; Jack et al., 2010; Shaw et al., 2017), the importance of networking activities for embedding a business in its proper context is highly important for entrepreneurial survival and success. However, *how* such activities are localized and employed for EL purposes is largely missing from the literature, particularly how local embeddedness unfolds in learning to recognize opportunities (Rae, 2004, 2017). The research approach employed here, enables an in-depth examination of how local embeddedness operates through EL in networks over time from a practice-based approach (Cope and Down, 2010; Chalmers and Shaw, 2017), with a focus on creative micro-entrepreneurs in the Norwegian wool industry. Grounded further in a socially-situated perspective, our research has extended relational studies to EL (El-Awad et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Nieminen and Lemmetyinen, 2015) by adding local embeddedness as a contextualizing dimension and identifying four main themes of localized relational learning practices. These consist of

accessing localized knowledge across spatial contexts, localized co-creation in learning to recognize opportunities, localized opportunity legitimization and *moving the knowledge front of embedded localized practice through bridging.*

Inspired by Shaw, Wilson and Pret's (2017) call for more insights into embedding processes that underpin entrepreneurial agency at a micro-level (Müller and Korsgaard, 2018), our findings touch upon important knowledge gaps on how localized practices enhance EL and opportunity recognition through four different embedded practices. The first learning practice, *accessing localized knowledge across spatial contexts*, seems to represent the platform by providing sufficient conditions for localized learning to be mobilized between actors. While wool actors are dispersed geographically, prevented spatially from knowledge interactions, our entrepreneurs show how they can overcome this through a 'go local approach'. By travelling locally and creating a community of like-minded local enthusiasts with similar values, the entrepreneurs increase their embeddedness in localized knowledge as individual entrepreneurs, and at the same time this activity serves in overcoming what Tödtling et al. (2011) define as 'institutional thinness' within their own small-scale industry sphere. Through transferring knowledge across spatial contexts and between actors, this ultimately serves to build an informal community of localized practice (Lave and Wenger, 1991), where the micro-entrepreneurs practice in a common domain sharing their experiences and knowledge across spatial contexts to improve their innovativeness and overcome knowledge constraints (Lefebvre et al., 2015). Their shared domain consists of distributing specialized and localized knowledge in the networks. Our study, therefore, extends Jack and Anderson's (2002) local embeddedness concept to the social level and across spatial contexts.

While the seminal contextualized studies of Korsgaard and colleagues (Korsgaard et al., 2015; Müller and Korsgaard, 2018) have identified levels of resource embeddedness and the use of locally anchored knowledge to facilitate opportunity recognition, we extend these findings further by revealing underlying practices that might facilitate this: *localized co-creation in learning to recognize opportunities* and *localized opportunity legitimization.* The first practice exemplifies the notion of a contextualized actor dependent co-creation process (Sarasvathy, 2001), in the sense that opportunity recognition is driven by important norms and values shared among local actors, as a compass for learning to recognize opportunities, reflecting a value-based

effectual approach. This value compass is also reflected in the entrepreneurs' ability to discover and operationalize contingencies from local networking. The last practice can be conceptualized as the trajectory of localized embedding, explaining to what extent entrepreneurs legitimize their opportunities and businesses locally, extending upon the findings of Müller and Korsgaard's (2018) non-local/local embeddedness divide in exploitation of resources. We found intriguing nuances in the localized embedding practices in the process behind how entrepreneurs legitimize their opportunities, varying from getting formal acceptance for the opportunity among local networks to using local networks as a test market for the opportunity and, hence, anchoring the opportunity in a local market. The last and highest level of localized opportunity legitimization is here exemplified when an entrepreneur uses and commits the local network in order to realize the opportunity, hence securing both local resources and a market for the opportunity simultaneously. At the highest level, the founder also lives and engages in the community, showing high place attachment, which also provides the necessary legitimacy to anchor the business locally and, consequently, access to resourcing it. Being locally anchored and peripheral materializes fewer social connections than in more central districts, but those that do exist seem to have a more central role (see also Rae, 2017) because the actors all share a common emotional place attachment (Kibler et al., 2015. Ultimately, our process analysis approach contributes by pinpointing central aspects of the entrepreneurial dynamics and agency of localized opportunity recognition and legitimization that lie behind the more 'static' rural entrepreneur typology introduced by Müller and Korsgaard (2018).

Most importantly, this study highlights an important paradox connected to the liability of 'smallness' and 'otherness', industry wise (Anderson, 2000; Politis, 2005), by showing that marginality through being anchored in localized knowledge, can in fact provide the space and agency for changing the industry agenda through the introduction of new practices by bridging to a more dominant industry, as reflected in our last practice: *moving the knowledge front of embedded localized practice through bridging*. While Shaw, Wilson and Pret's (2017) study reveals how networking affects broader industry structures and distributions of resources, our study contributes to deepening further the understanding of such activities across boundaries of markets and industries, by not only embedding the actor in its own industry, but also bridging to other more dominant players. Interestingly, peripherality in itself provides not only new insights and

opportunities for local actors who have less access to the mainstream (Rae, 2017), but also the opportunity to influence core industry practices of dominant actors, and ultimately transitioning the knowledge front of localized embedded knowledge to the mainstream market, localizing as well mainstream actors. Although a highly contextualized exemplar, this study ultimately contributes to the knowledge front through an in-depth understanding of networking processes and outcomes for small-scale businesses (Jack et al., 2010; Shaw et al., 2017).

We present our contributions to entrepreneurship theory by proposing a model of localized relational EL in Figure 1. The model captures how the micro-entrepreneurs were driven by a local embeddedness that encouraged them to reach out across spatial contexts to access localized knowledge and develop a localized practice community. This knowledge building process laid the foundation for a localized and value-based means-driven co-creation in learning to recognize opportunities. Entrepreneurs worked to leverage their localized knowledge base and ambition to legitimize their opportunities through various levels of embedding, ranging from using local networks for sound-boarding to secure commitment from locals to join in a mutual 'investment' in the business. Being embedded in a localized network provided the agency for a community-based movement of locally anchored knowledge and tacit practices to the dominant large-scale industry context through bridging.

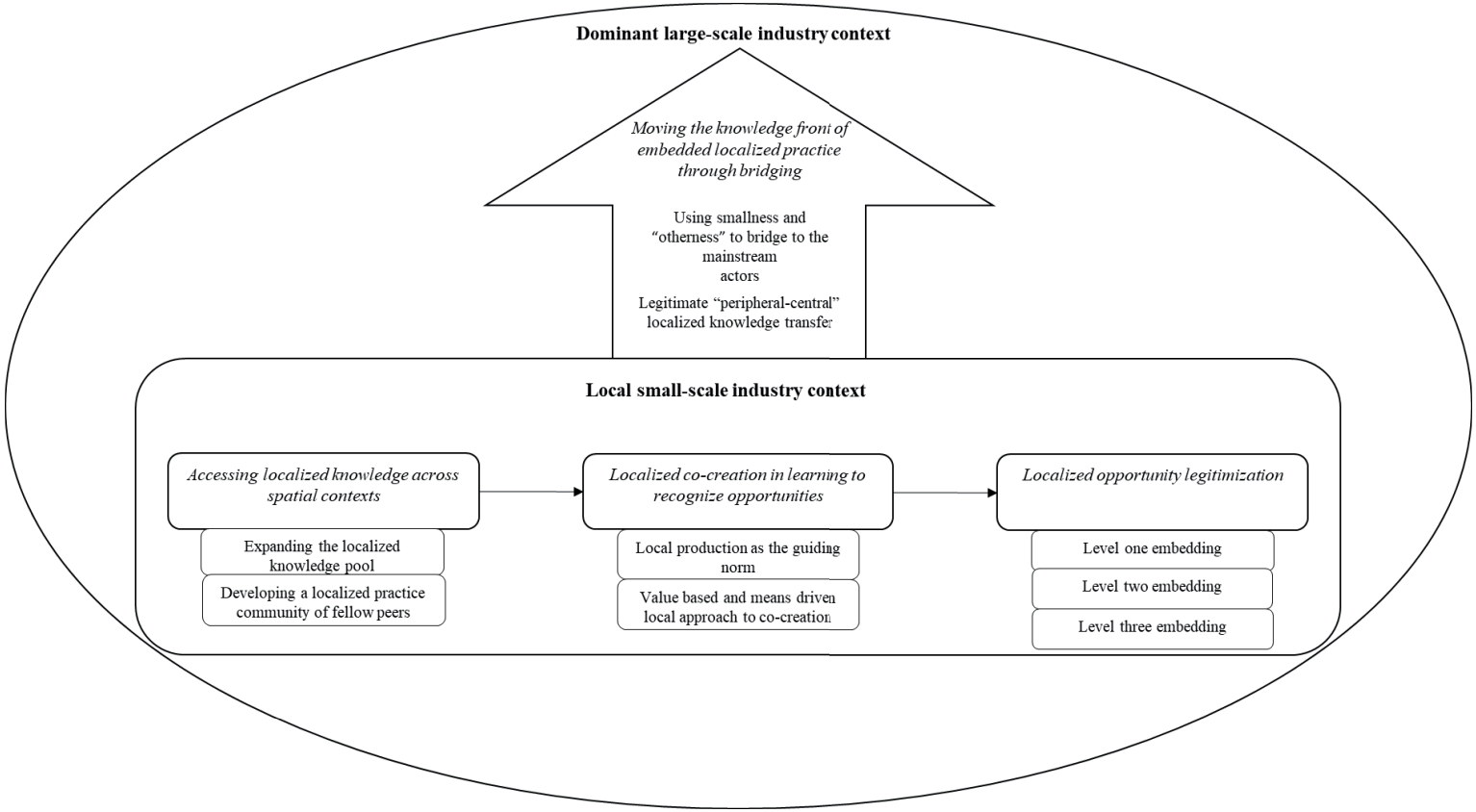

Figure 1. The model of localised relational EL.

Conclusion and implications

This multiple embedded case study contributes to the general field of relational EL (El-Awad et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Nieminen and Lemmetyinen, 2015) by expanding on the concept of local embeddedness (Jack and Anderson, 2002) and developing a pioneering understanding of embedded EL experiences (Cantino et al., 2017; Karataş-Özkan, 2011; Lefebvre et al., 2015; Soetanto, 2017). The study has identified important localized practices and provided content and depth to the concept of *localized relational EL*. This study is, therefore, responding to a placeless discourse in entrepreneurial practices through the concept of local embeddedness, joining several influential scholars to inform the research community about the importance of the context (Chalmers and Shaw, 2017; Welter, 2011; Zahra et al., 2014). The implication of embracing local embeddedness in relational EL is providing answers to the *how*, expanding on recent insights from Müller and Korsgaard (2018), to explore how local embeddedness could facilitate opportunity recognition through learning in networks. Furthermore, the study extends the recent study of Shaw, Wilson and Pret (2017) in understanding the underlying embedding mechanisms of localized networking and their evident importance in opportunity recognition and knowledge transition out of the micro context.

Our study opens new avenues for future research on relational EL in small businesses as well as in other contexts. While being illustrative, the results are still limited to our research context, i.e., sustainability-oriented micro-businesses in the creative industries. It would, therefore, be interesting to see what kind of embedded and practice-based learning patterns exist in other types of small-scale industries in other settings.

By applying the concept of local embeddedness to sustainability-oriented businesses, we found that the entrepreneurs worked altruistically as a community with shared values. Interesting future research possibilities may pursue this line of inquiry, as it would expand the understanding of sustainability-oriented businesses as well as help verify what shared value means in other embeddedness studies in new research contexts (Korsgaard and Anderson, 2011).

This research is based upon a multiple embedded case study from Norway. Thus, our approach is limited in terms of generalizability. Future case studies in comparable creative and craft-based industries are welcome to verify our themes and dimensions more rigorously (Flyvbjerg, 2006). That stated, our initial intention was not to

empirically generalize, but to provide depth and insights into a yet under-investigated topic in EL research. We employ Flyvbjerg's (2006) reasoning that even if one cannot formally generalize knowledge from case study research to other industries in the strictest sense, it can be of value for theorizing. It is also likely that our main findings reflect the learning experiences of other creative and craft-based small businesses relying on local production. However, we have to acknowledge that one confounding factor is that the businesses were established at different times and the entrepreneurs had different starting points for learning. However, we can justify our findings in that they were all entrepreneurially working on the same joint ambition and were all developing new opportunities from locally-produced wool from ancient breeds, trying to find markets for it.

In terms of implications for entrepreneurial practice, our study points to the importance of community-based learning in the creative industries and that networking and cooperative learning across geographical regions might increase both individual and industrial legitimacy for creative micro-businesses aimed at employing and promoting localized production practices. By investing in reciprocal- and open-knowledge sharing and apprenticeships, one creates shared norms in the network, assisting the entire small scale and localized industry in transferring the knowledge between actors, and across local and less local areas. This orientation feeds into local networking and cooperation with similar peers. Thus, having the same values could be used as a basis for co-creation and embracing new and unexpected relations. Moreover, local networks and relations can be more strategically employed within a legitimation strategy to test, market and anchor the opportunity, depending on the entrepreneur's local attachment and ambition to invest locally. Last, but not least, small actors should value their 'otherness' and localized knowledge as an asset and use this more deliberately in trying to influence the more dominant players, in order to maintain interest for their domain of practice, spread localized knowledge and establish new industrial practices. Such bridging would expand the micro-entrepreneurs' networks and provide new and fruitful strategic partnerships that provide access to other markets and, ultimately, also strengthen the more resource-constrained local communities where entrepreneurs reside.

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Appendix. Data coding

Theme 1: ***Accessing localized knowledge across spatial contexts***		
Examples of raw data quotes	**First-order codes**	**Second-order sub-themes**
I started with the MA and that led me onto working with wool, and there were a lot of seminars I went to that year, yeah really… interesting people. A lot of what came out of those seminars was this whole thinking about working more local and that was kind of the answer to being more sustainable… so I started looking into local production in Norway (Linda).	Local knowledge inspiration	**Expanding the localized knowledge pool**
We have travelled around Norway to visit various people which made them willing to provide more… It is a trust-based relationship that has to work …well if it should last over time (Merete).	Relational commitment	
I try to be good at travelling around and actually physically meet the people that I've become acquainted with. Visit spinning mills, travel [up North] and yeah, use some time to maintain the environments that I am familiar with (Berit).	Customized networking	
We don't have that many secrets, which is a benefit for us. I'm not that afraid that someone will steal our ideas (Sigrid).	Network openness	**Developing a localized practice community of fellow peers**
Currently we are trying to get an organized cooperation on reserve parts for the spinning mill for example. We do other similar things as well, we have common communication with producers and spinning mills, so it's quite a deep cooperation right now (Sigrid).	Reciprocal benefits	
I have done work-training at [a large wool factory], it was before I opened a spinning mill myself; it was very positive (Åsa).	Informal apprenticeships	

Our networking work is divided into several parts. There is a practical handcraft part that focuses around the production of yarn – the goods we deliver, and there is another part that focuses on competence development (Sigrid).	Joint learning practice	
Collaborating, just making it easier to pick up the phone and call someone if you wonder about how a system works or whatever it can be. I think it's like just a matter of creating these 'spaces' where people can talk together (Linda).	Legitimate learning 'space'	
Theme 2: ***Localized co-creation in learning to recognize opportunities***		
Examples of raw data quotes	**First-order codes**	**Second-order sub-themes**
We're very good at it in Norway. We use parts of the land that are difficult to use commercially otherwise; I'm talking about sheep grazing now. It is also simply easier – one has control over the value chain, one knows the producer, you know who they are and what they are doing. It's much easier to develop something when you know those things (Hans).	Value chain transparency	**Local production as the guiding norm**
The idea is to contribute to increased value creation for endangered Norwegian sheep races. They are dying out because their wool is not valuable in the global market (Sigrid).	Local heritage	
I arrived into an old cultural landscape that was about to re-grow and I thought, how can I live from this cultural landscape and use the value that the landscape provides and actualize a process from the landscape to a finished product and for me the answer was keeping goats and sheep. … [Through our work] we have attained a unique competence in relation to the process. If we get wild sheep wool from [southern Norway] we know it will be fatty, because it comes from a humid climate with a lot of rain. If we get spæl sheep from [the mountains in mid-Norway] it will be dry and have a lot of undercoat because it's a cold dry climate	Place specific uniqueness	

there. We get very close to nature and where the animal is (Åsa).		
There is something Norwegian with everything we do, [we are thinking about] how to make it visible, build on it as a joint thought or a joint picture. … Of course, the ideological – sustainability, climate concern lay in the foundation here. It is about trying to do least damage perhaps. When we have created something new, it's important that the whole value chain has contributed with doing something positive (Hans).	Sustainability as compass	**Value based and means driven local approach to co-creation**
When I started the spinning mill, my first thought was to use the network I had built up. Especially from the years [when I worked] a lot with sheep farmers and endangered sheep races (Sigrid).	Localized mean set	
We had an early idea, but the actual product to make was of less importance. It was important to make something that could be produced within the country's borders but [it was not definite] it would be a wool sweater… We got stuck on finding Norwegian raw materials for buttons and eventually decided to look into timber firms. We had to go through very many [firms] until we finally found a small [firm], the only one that could guarantee the timber was Norwegian and that it hadn't travelled to for example Sweden. From that relation we are now building a small micro-house where the point is to use Norwegian timber (Merete).	Value and means driven	
You never know which relations will be useful, that's the point. It takes time to maintain a network, [but] you never know who is going to generate something positive (Hans).	Unexpected network events	
But then I met [a woman from a small yarn company] she had just made a yarn that had 20% cashmere and 80% wool. And she tells me – you have to think the opposite, you are increasing the luxury of the wool, not that you use wool to deteriorate the quality of angora. You use angora to improve the quality of the wool.	Localized new insights	

It was suddenly a whole different way of looking at it, it was just 'Wow', it was actually cool to have something 50/50, it was not bad at all (Berit).		
Theme 3: ***Localized opportunity legitimization***		
Examples of raw data quotes	**First-order codes**	**Second-order sub-themes**
I use my network, I test out my thoughts and ideas on anyone I meet (Siri).	Localized viability testing	**Level one embedding**
We've been very many places, looked around and talked to people and now, two years later, we are beginning to define the guidelines (Merete).	Localized sound boarding	
I just gathered my friends that are interested in winter sports, mountain tours, surfing; I talked to people I can relate to and it's now that I'm beginning to have a foothold (Hans).	Localized test market	**Level two embedding**
I kind of crowd-sourced most decisions to them [local friends] (Hans).	Localized decision outsourcing	
Actually, we started the firm through a meeting with the network of people that were interested in wool. We invited around 30 people to a meeting – sheep owners, others interested in wool, hand spinners – many different people. This was the start and we used them very consciously in that they were made accountable when they were there. We concluded by the end of the meeting that we will start a spinning mill. But the question was who will do that, and no one raised their hands. So I said ok, I'll start a spinning mill (Sigrid).	Localized commitment	**Level three embedding**
I can't stand going to fairs so I always try to find other solutions. For example, I'd send a crate of yarn to a farmer that I know from my network and who's going to the fair anyway (Sigrid).	Locals as promoters	
Suddenly you realize that someone you thought of as a [client], has some resources we don't have. Suddenly you realize, this is fantastic, we can use this for something (Sigrid).	Locals as resources	

Instead of this little village dying out, there are plenty of opportunities today. We're not big, we have three positions, but in the context of this small village, three positions are not that bad, it also has a ripple effect for others (Åsa).	Local community building	
Theme 4: ***Moving the knowledge front of embedded localized practice through bridging***		
Examples of raw data quotes	**First-order codes**	**Second-order sub-themes**
For example, this [wool factory], I didn't think we would cooperate. I've had a shallow dialog with them for over one and a half years and then I just went there. We got to clarify and plan opportunities for a potential cooperation. Everything turned out so well, now I can just call them if I wonder about anything (Hans).	Small-scale hospitality	**Using 'smallness' and 'otherness' in bridging to mainstream actors**
[Perhaps] they also have some gain from us… [although] it's not certain they see it immediately themselves (Åsa).	Peripheral influence	
I invited her to help out with wool sorting and classification. She's the leader of [an industry organization that classifies wool]. She was very sceptical at first, thinking that wool from these grey sheep is just bad. But during the first meeting she changed her opinion completely, [saying] it had a very nice quality – she got very enthusiastic about it (Sigrid).	Moving industry standards	**Legitimate 'peripheral-central' localized knowledge transfer**
They [a different spinning mill] hadn't sorted wool based on races, but based on quality, and it's a completely different thing. One of the colours will give a thick furry yarn that is difficult to spin thin enough. While the black colour for example, it gave a very thin yarn and it was difficult to spin thick enough. The colours were supposed to be [the same thickness] since you were supposed to be able to knit them together, so it was a challenge. We've always spun yarn from these races, so we hadn't thought of it as problem at all (Sigrid).	Transferring tacit handicrafts	
We travel and hold presentations; those that come to visit here get a whole	Local market consciousness	

different understanding of what lays behind the yarn they will later buy. It is an 'aha' experience for many after they have been in there for 20 minutes or half an hour and realize they are only halfway though. They go 'Oh! Now I get it!' and that is very important because they, in turn, spread the knowledge and increase consciousness (Helene).		
We invited Tone and Ingun to hold a presentation about the use of wool in interior and architecture and invited people from the sector; having several to rely on makes the [risks] a bit less (Merete).	Third party brokering	

Paper 4

The role of effectual networking in small business marketing

Elin Kubberød, Viktorija Viciunaite and Siw M. Fosstenløkken

Abstract

Purpose In this paper, we addressed the recent calls for an in-depth investigation of the entrepreneurial marketing (EM) practices of small businesses and a further conceptual development of EM under market uncertainty. Drawing on the EM mix (i.e. *person*, *purpose*, *practices* and *process*), we aimed to conceptualise EM under market uncertainty through principles of effectual networking.

Design/methodology/approach We conducted an in-depth case study of an owner-manager who networks with many different stakeholders to create new markets for wool in the Norwegian wool industry.

Findings Situated within the creative and craft-based industries, our study demonstrates that market uncertainty can be reduced through effectual networking to produce highly beneficial outcomes for small businesses. Our findings give rise to a new model of the EM mix under uncertainty, emphasising the role of the owner-manager (i.e. *person*) and the *purpose* as the outset and driving force of the EM *process*. These two elements constitute the initial means in the means-driven EM *process* and the foundation for subsequent EM *practices*. The *person*, *purpose* and *practices* interact iteratively, and focal effectual networking principles guide EM *practices*.

Originality/value This paper expands and contextualises existing theories on EM under market uncertainty by introducing the effectual networking perspective. This represents a hitherto under-investigated area of research in small business marketing.

Keywords Entrepreneurial marketing, Entrepreneurial marketing mix, Effectual networking, Small business marketing.

Paper Type Research paper

Introduction

Small business owner-managers face many challenges. Among these challenges, marketing is one of the most important for survival, renewal and growth (Jones and Rowley, 2011). The prevailing view in marketing research is that one should start with an identified market need, conduct market research and orchestrate resources to reach a measurable marketing goal (Sarasvathy, 2001). However, this is not necessarily the case for small business owner-managers entering new market territories, where they do not possess prior market-relevant experience or the right configuration of resources. Because they are often acting under limited knowledge about market needs and conditions, small business owner-managers can instead effectually create the market themselves by employing the set of means already available to them at a given point in time (Read *et al.*, 2009; Sarasvathy, 2001; Sarasvathy and Dew, 2005).

Marketing in small businesses often involves leveraging a scarce resource base through partnerships with other stakeholders (Morris *et al.*, 2002). Unlike with larger firms, the success of a small business rests largely on the marketing skills and management practices of the owner-manager (Franco *et al.*, 2014; Hills and Hultman, 2013). Owner-managers of small firms usually employ unconventional marketing practices with great success (Martin, 2009; Morrish, 2011; Resnick *et al.*, 2016). They are often close to their market and their staff, which enables them to have an informal relationship with their customers, creating a unique position to gain easy access to market information and thus to make informed decisions (Zontanos and Anderson, 2004).

Considering these insights, entrepreneurial marketing (EM) has emerged as a field and term at the interface between marketing and entrepreneurship (Martin, 2009; Morris *et al.*, 2002; Morrish, 2011), distinguishing between conventional marketing practices in established and large corporations and more agile practices in smaller and emerging organisations. EM as a term is not considered as a predefined management decision set (Hills *et al.*, 2008) but rather conceptualised as a process of entrepreneurial enactment addressing many issues simultaneously: opportunity, innovation, uncertainty and resource constraints (Beverland and Lockshin, 2004; Morris *et al.*, 2002).

Knowledge of how EM operationalises in the small business context is rather weak in the EM literature (see Lam and Harker, 2015; Lehman *et al.*, 2014; Martin, 2009; Thomas *et al.*, 2013 for notable exceptions). Characteristic of EM practices is that instead

of relying on planning frameworks, such as the traditional marketing mix of the 4Ps (i.e. *product*, *price*, *place* and *promotion*) (see Jobber, 2009; Kotler *et al.*, 2008), small and entrepreneurial businesses often and unintentionally develop their own, informal, entrepreneurial mix (Martin, 2009; Zontanos and Anderson, 2004) that focuses on relational-based practices to reach markets (Carson *et al.*, 1995; Franco *et al.*, 2014; Stokes, 2000; Zontanos and Anderson, 2004). More specifically, Zontanos and Anderson (2004) argued that the differentiating factor of traditional marketing in larger corporations compared to marketing in small businesses can be found in the owner-manager's ability to network, which is inarguably an important contributor to small businesses' marketing (O'Donnell, 2014). However, how these network practices are developed under uncertain market conditions is largely missing from the EM literature.

Recently "effectual networking" has been introduced as a term relevant to such conditions, where the entrepreneur's goals are ambiguous (Engel *et al.*, 2017), the decision-making context is uncertain, and the market must therefore be created rather than found (Alvarez and Barney, 2007; Sarasvathy and Dew, 2005). In this paper, we consequently addressed the recent calls for an in-depth investigation of the EM practices of small businesses (Bocconcelli *et al.*, 2018; Morrish, 2011) and a further conceptual development of EM (see Hills *et al.*, 2008) under market uncertainty. To accommodate such a call, we expanded recent effectual accounts to EM (Crick *et al.*, 2018; Morrish, 2011; Yang and Gabrielsson, 2017) by introducing core principles of effectual networking (Engel *et al.*, 2017). Drawing on Zontanos and Anderson's (2004) 4Ps (i.e. *person*, *purpose*, *practices* and *process*), later conceptualised as the EM mix by Martin (2009), we aimed to conceptualise EM under market uncertainty through effectual networking.

Deacon and Harris (2011) argue that contextual studies are particularly beneficial in advancing our understanding of EM practices. Entrepreneurial thinking is now rapidly being embraced by smaller businesses in the creative and craft-based industries, which are among the fastest growing sectors in the economy (Schulte-Holthaus, 2018). Recent studies have demonstrated the importance of creative and craft-based products in regional development and in terms of enhancing competitiveness in non-rural and larger markets (Korsgaard *et al*., 2015; Müller and Korsgaard, 2018; Rentschler *et al*., 2018; Teixeira and Ferreira, 2019; Verhaal *et al*., 2017). While, for instance, creative and craft-based activities aim at creating something of use-value in traditional markets,

entrepreneurial activities, on the other hand, aim at creating something completely new of higher value in new markets.

As the advantage of local embeddedness has to be recombined and leveraged, in order to successfully bridge between the traditional market and into new ones, we argue that this situation represents an entrepreneurial challenge loaded with uncertainty. This market-creation process (Sarasvathy and Dew, 2005) entails creating new opportunities from existing means and resources through networking with new actors outside of traditional markets (Müller and Korsgaard, 2018). Effectuation theory (Sarasvathy, 2001) does not discuss whether market uncertainty can also be related to contextual attributes, nor to what extent the entrepreneur can efficiently manoeuvre his means between market contexts. This research is grounded in the assumption that, in this situation, market creation entails more than just general entrepreneurial uncertainty – it also involves uncertainty related to the ability to efficiently exploit local resources, heritage and tradition when exploring new opportunities in other market contexts.

To investigate the topic, we conducted a single case study of a focal owner-manager in the Norwegian wool industry, someone who networks with various stakeholders to create a new market for Norwegian coarse wool from ancient breeds of sheep. The following research question guided our research:

> *How does effectual networking operate through the EM practices of a small business owner-manager operating under market uncertainty?*

The rest of the paper is structured as follows: first, we engaged with the literature on EM and effectual networking, situating our research and developing our theoretical underpinnings. We then outlined our methodology and findings, before discussing these in light of the literature. We concluded by outlining our contribution, suggesting implications for future research and discussing limitations of our study.

2. Theoretical framework

2.1 The EM mix – reframing the original 4Ps

While still prevalent in marketing research and practice, the highly structured and disciplined alignment of the 4Ps marketing mix has come under scrutiny (Martin, 2009; Schindehutte *et al.*, 2009) due to its limitations in conceptualising marketing practices in

smaller and entrepreneurial firms. In this respect, Zontanos and Anderson (2004) suggested reframing the traditional 4Ps into a new set of 4Ps to better reflect marketing in small firms. Their 4Ps (i.e. *person*, *purpose*, *practices* and *process*) integrate as a broad categorisation to explore how marketing emerges from a complex set of relationships and practices. Martin (2009) later offered an ethnographic investigation of a successful entrepreneur's marketing practices, using these 4Ps as a broad framework for interpretation, referred to as the EM mix. However, the framework is still in its infancy and warrants further conceptual development and empirical testing under different entrepreneurial settings, such as under market uncertainty. Table I presents an analysis of the literature relevant to characterise and add meaning to the various broad categories of the EM mix upon which this study was built.

The marketing of small enterprises represents an intriguing phenomenon of inquiry because the various practices are shaped by the entrepreneur's specific preferences and skillsets as much as by those of the customers in the target market (Lehman *et al.*, 2014). In this case study, we explored this dynamic in greater depth.

As the framework of the EM mix suggests, EM under uncertainty is not as much a managing activity as it is a network-based *process* (Gaddefors and Anderson, 2009) comprising various *practices* driven by the owner-manager (i.e. *person*) and his staff, who operationalise the entrepreneur's aspirations (i.e. *purpose*). Moreover, under uncertainty, this process is means driven rather than being goal driven, welcoming any willing stakeholder to self-select into the process and pre-commit only what they can afford to lose (Sarasvathy and Dew, 2005). However, a more nuanced understanding of the underlying principles influencing this networking process is necessary – hence, we introduced effectual networking.

Table I. Organising EM into the new 4Ps

EM element	Descriptive features	Contributing scholars
Person	A central and influential owner-manager in all firm-level activities	Leitch and Volery (2017); Simsek *et al.* (2015)
	An owner-manager with little marketing expertise but high technical or domain-specific expertise, which influences their approaches	Martin (2009); Stokes (2000); Zontanos and Anderson (2004)
Purpose	An owner-manager's own aspirations often operationalised through their efforts to reach the market	Martin (2009); Skarderud and Kubberød (2016)
	An owner-manager's motivation driving the product and promotion strategy	Morris *et al.* (2002)
Practices	An owner-manager using informal, personal and creative ways to enter the marketplace (e.g. flexible market orientation, shorter planning horizons and quick adaptation)	Gilmore *et al.* (2001); Hill and Wright (2000); Whalen and Holloway (2012); Zontanos and Anderson (2004)
	An owner-manager focusing on product development first (innovation-oriented) and then focusing on the customer through a bottom-up process	Stokes (2000)
	An owner-manager relying more on their own experience and relationship feedback than on formal marketing research that uses customers as sparring partners	Bocconcelli *et al.* (2018); Hills *et al.* (2008); Skarderud and Kubberød (2016); Stokes (2000)
Process	Non-linear and means-driven co-creation process (effectual) at the expense of linear and predictive strategising (causal)	Sarasvathy (2001); Sarasvathy and Dew (2005); Wiltbank *et al.* (2006)
	An owner-manager/entrepreneur welcoming any willing stakeholders, such as early partners and customers to self-select (networking approach)	Gaddefors and Anderson (2009); Sarasvathy and Venkataraman (2011)

2.2 Effectual networking and the EM process

A small firm's advantage compared to a larger firm is the ability to develop personal and trusting relationships with customers (Zontanos and Anderson, 2004). However, scholars did not differentiate between network-based marketing activities in different situations, such as under market uncertainty. Recent theorising on effectual networking suggests that networking under uncertainty entails a lack of information and ambiguous goals (Engel *et al.*, 2017) that make it difficult to plan and strategize. Instead, by using pre-commitments from others, the entrepreneur minimises the cost of experimentation and maintains a flexible position (Chandler *et al.*, 2011). From an EM perspective, we

explored how an owner-manager actually aligns for actors to pre-commit, as we know that entrepreneurs are particularly efficient at convincing others, and they work relationally to do so (Galkina and Chetty, 2015; Zontanos and Anderson, 2004).

Intelligent altruism fuels pre-commitments in effectual networking under uncertainty. It captures a logic for relationship building that is neither extremely sacrificial nor completely selfish (Simon, 1993). Van de Ven *et al.* (2007) referred to this as the "dual drive for self- and collective interests". At the core of the principle is the acknowledgement that helping others can inspire reciprocity and lead to future benefits for oneself (Engel *et al.*, 2017). Thus, intelligent altruism allows to both build relationships and influence the behaviours of stakeholders (Galkina and Chetty, 2015). Thus, we focused on how an owner-manager employs intelligent altruism as an influential strategy for marketing practices.

Effectual networking will, by definition, inject randomness into the market process, potentially leading to unexpected discoveries (Dew, 2009; Perry *et al.*, 2012; Sarasvathy and Dew, 2005). As such, effectual networking can function as an engine to generate contingencies and harvest serendipity (Engel *et al.*, 2017). Dew (2009) argued that such serendipities or "accidents" can shape entrepreneurial success more than planning can. This points to the necessity for the entrepreneur to be able to benefit from and harvest such unexpected discoveries (Sarasvathy, 2001). Consequently, we investigated how an owner-manager generates and leverages unexpected contingencies in marketing practices.

3. Research design and methodology

For this study, we employed a single, in-depth, embedded case study design as a research strategy, investigating an owner-manager in the Norwegian wool industry and his new and existing network partners upstream and downstream in the value chain. The businesses in this value chain of wool represent our embedded units of analysis. An in-depth case study design is applicable when investigating a contemporary phenomenon in its real-life context emerging over time (Simons, 2009; Yin, 2013). As the phenomenon investigated here specifically occurs in a Norwegian context, we took into account that the findings must be interpreted as highly contextualised (Korsgaard *et al.*, 2015). Nevertheless, this contextual specificity provided us with a unique closeness to the phenomenon, making it possible to identify theoretically meaningful patterns from

concrete observations and data (Eisenhardt, 1989; Flyvbjerg, 2006) grounded in real-life practices. Scholars have embraced contextualised studies within entrepreneurship (Korsgaard *et al.*, 2015), and they have focused on what entrepreneurs actually do (Mueller *et al.*, 2012; Sarasvathy, 2001; Wing Yan Man, 2006). With this research approach, we aimed to provide new and relevant insights of both theoretical and practical value.

3.1 Case description

Inspired by Taylor and Thorpe (2004), we zoomed in on an owner-manager and his business relations. In line with our theoretical framework, our analysis focused on how the owner-manager uses his relationships (i.e. means) to develop a new market for Norwegian wool products. This owner-manager is leading a manufacturing company (hereafter named "Weaver") of apparel and interior textiles, with 32 employees situated in a rural district in Norway. Recently, the owner-manager started picking up on the trend promoting local wool production from endangered Norwegian wild sheep species, building sustainability and local sourcing into offerings and a business model (Hall *et al.*, 2010; Jolink and Niesten, 2015). This coarse wool is considered to be of little value, and there is little, if any, demand for it in the market, which poses a major marketing challenge. Nevertheless, Weaver is thriving and this market-creation process might enable the company to utilise and transform place-specific resources into valuable local assets when entering non-local and new markets (Müller and Korsgaard, 2018). This ambition is clearly visible on the company's website and through the owner-manager's involvement in several ongoing development projects. From a marketing perspective, this implies that the company can leverage this new situation to build and position an image that promotes, for example, place-specific and heritage resources. Hence, the company's unique positioning represents a marketing and entrepreneurial challenge for the owner-manager and his developer, as this is new territory for them.

3.2 Data collection and sampling

The data collection was done in five steps. In autumn 2016, we conducted an expert interview (Neergaard, 2007) to guide our strategic sampling of interesting cases to explore. The expert we consulted is regarded as the leading researcher within the Norwegian wool industry, having unique knowledge and a comprehensive overview of

all relevant actors and their relationship with each other, guiding us to the focal owner-manager of this study. In March 2017, we conducted an on-site visit and a semi-structured interview with our focal owner-manager and his project developer, concerning new markets for Norwegian wool. During 2017, we also employed a series of semi-structured interviews with the focal entrepreneur's network relationships to both explore their relationships and confirm the owner-manager's narrative with the actors involved. We expanded our interview data through a series of unstructured observations from three meetings (autumn 2017) involving the focal owner-manager and selected partners of his. We supplemented this with another interview with the project developer in autumn 2017 to follow up on project initiatives, as it was essential for the research to capture the dynamics and entrepreneurial dimensions of the activities and relationships. Taken together, this helped triangulate the findings among different sources and strengthen the validity of our research. As critical incidents are central to entrepreneurial processes, the critical incident technique, originating in Flanagan (1954), inspired our interviews. We probed for seminal relationship events in which the actors could recall having learnt something of significant importance for their business in terms of their practices within their network.

In addition, to gain a comprehensive contextual understanding for interpreting the results, we participated at eight industry-relevant events over a period of three years (2015-2018). This provided us with an advanced and comprehensive understanding which can only be achieved when researchers place themselves within the context being studied (Flyvbjerg, 2006).

In total, seven informants from six business cases were included. Due to privacy considerations, we anonymised the sample by giving the actors pseudonyms. See Table II for a presentation of the sample.

Table II. Presentation of actors and embedded cases

	Pseudonyms of actors	Core activity of the business cases	Number of employees, including owner	Classification	Data sources
1	***Eric***	Specialises in woven textiles – a provider of textiles for apparel and interior design	32	Focal owner-manager of Weaver	One on-site visit, media entries (i.e. web site, media coverage), a 120-min interview and 10 hr of unstructured observations
	Beate			Employee at Weaver – project developer responsible for new product development in Norwegian wool	As above, plus a 75-min follow-up interview
2	***Linda***	Specialises in the design and production of garments – parts of the collection use Norwegian wool from endangered and ancient sheep species	8	New customer	Media entries and a 50-min interview at a fashion fair
3	***Vivian***	New start-up within the design and retail of apparel and interior items that use Norwegian wool from endangered and ancient sheep species	1	New customer	One on-site visit, media entries and a 148-min interview
4	***Sigrid***	Spinner of fibres for self and for hire, using Norwegian wool from endangered and ancient sheep species – sale of yarn, knit sets and finished garments – offers training courses for farmers and customers	3	Supplier	One on-site visit, media entries, a 116-min interview and a 33-min phone interview
5	***Helene***	Spinner of fibres for self and for hire, using local mohair from endangered sheep species and other animal fibres – sale of yarn, knit sets, finished garments, knit accessories and interior textiles	9	Supplier	One on-site visit, media entries and a 59-min interview
6	***Lise***	Large-scale scouring and sorting of wool.	51	Supplier	One on-site visit, media entries, an 81-min interview and observations of a presentation during a national wool day

3.3 Data analysis process

First, the transcripts were coded openly. Second, a thematic analysis approach (Mason, 2002) was used by building on the existing knowledge deduced from our broad framework for the EM mix to explore and categorise the main themes and patterns emerging from our raw data. These were related to the *person* (experience, available knowhow, resources and relations), *purpose* (initial motivations, vision and inspiration for new markets), *practices* (market research, promotional activities and product/market development) and *process* (effectual approach versus goal-driven approach). We analysed each interview, one by one, to identify patterns and unique themes across the 4Ps that the owner-manager employs. We then analysed how the effectual networking principles came into play across the themes found. These principles were *alignment of actors to pre-commit*, *intelligent altruism as an influential strategy* and *generation and leveraging of unexpected contingencies*. We paid particular attention to the processual dimension in the research as we followed the owner-manager over a period, looking for seminal events in networking relationships during that period. Furthermore, using a triangulation approach that relied on the owner-manager's network (Taylor and Thorpe, 2004) allowed us to view and expand interpretations from different angles to the main patterns in the data, searching for meaningful themes.

Five central themes of practices emerged from the analysis. These themes represent the underlying patterns in the interplay between the 4Ps and effectual networking and can be described in the following way: 1) *means-driven networking in developing a purpose for promotion*, 2) *a practice of altruistic "in-house" market research*, 3) *leveraging purpose and person to align pre-commitments*, 4) *a practice of prototyping a market through early-customer co-creation*, and 5) *generating and harvesting serendipities as a practice for market orientation*. In the final step of the analytical process, we returned to our entire dataset, opening the coding scheme to confirm that our final themes reflected the main structures and data richness, thus expanding on the prior theoretical framework. We used our observational data to enrich and validate the final interpretations of the overall themes. In the following chapter, we illustrate these five themes through selected quotes from the narratives.

4. Findings

In this section, mirroring our empirical investigation, we present how our focal owner-manager employs the main principles of effectual networking in the process to develop a market for Norwegian wool from ancient breeds of sheep. In the following subsections, we present the five main themes of marketing practices, and we complement our findings with both suppliers' and customers' perspectives to validate the main themes revealed in the analysis.

4.1 Means-driven networking in developing a purpose for promotion

It is rare for small business owner-managers to be integrated with a strategic network of contacts aligned to suit all their needs when working with new market opportunities (Engel *et al.*, 2017). In this respect, Eric was initially involved in a developmental project to reproduce a 1500-year-old patterned Viking wool textile found under a glacier in the mountains of Norway, and he reflected on this project's cooperation as the inspiration for his interest in wool from ancient breeds of sheep:

> It was first about whether we could produce something similar to the old shirt that was found in [a glacier]. We got some pattern drawings and initiated the production process, adapted our equipment... It was when we got that project to copy the old shirt that we first started gaining some speed.

Eric employs those he already knew from this particular early project to spark the process of exploring new markets for ancient wool (Sarasvathy, 2001). From this project's means set, he expanded his relationships based on temporal markets and a vague idea rather on any identified market need or predefined segment, reflected in the following quote:

> One and a half years ago, when we showed [Viking textiles] at a stand in [a trade fair], we arranged a meeting where we invited some people, at first all sorts of people – clothing designers, textile designers, product developers. We had a meeting where we discussed what we can do with Norwegian wool; I presented what we have done with [Viking textiles] and suddenly the ball just started rolling from there. Many came up with good ideas there; I think we should do it again (Eric).

This example further demonstrates a means-driven approach, where Eric employed a combination of available material resources, knowhow and existing relationships to leverage these available means for an informal meeting to discuss the market potential for Norwegian wool.

Interestingly, from these interactions, a *purpose* started to emerge:

> We want to market it and say that this is Norwegian; first of all, it is Norwegian wool, it is produced at [Weaver], it has good quality, lightfastness, durability. Since we will have the wool, the spinning of yarn and the weaving in Norway, it will not be a cheap product. As a result, we cannot compete based on price, but we can do it based on quality (Eric).

During this early stage, Eric discovered his power as a storyteller, participating at a design show where an American television team interviewed him. Eric's story about the reproduced wool fabric moved the interviewer, as reflected in Eric's account:

> It was Norway's oldest textile, and if you look at [Viking textiles], you can see a diamond twill. They knew their stuff back then, too. This story gave me an "aha" moment – it was so strong that it brought out tears in a person. So, storytelling is somewhat important in this whole thing.

Later on, Eric used this particular event to tell the story from his point of view (as a textile engineer, he can speak about the uniqueness of the handicrafts in the patterns). He promotes Viking heritage on the company's website, thus materialising the *purpose* more clearly. Interestingly, by employing this story obtained from his networking, Eric obtained a short-cut to brand imaging on both corporate and product levels. Consistent with established marketing research, we found that the founder highly influences decisions regarding image building (Abimbola and Kocak 2007; Krake, 2005; Skarderud and Kubberød, 2016), thus highlighting the importance of the *person* and his *purpose* in the EM mix, as this can be leveraged to promote a cost-effective way to attract new stakeholders.

4.2 A practice of altruistic "in-house" market research

Eric's business started the process of experimenting with locally sourced Norwegian wool by acting upon a growing market interest from start-up designers, a growing market

interest to which he largely contributed through his involvement in the Viking textile reproduction project and the promotion thereof:

> There was a lot that happened in 2015-2016. We had quite a few referrals from Norwegian clothing designers about Norwegian wool – why not make a product out of Norwegian wool? I thought it was interesting, indeed – why not make something out of Norwegian wool? So, we started a project, sending an application to Innovation Norway, and they thought it was exciting. We got some money for research and to start a wool project (Eric).

> The main goal was to take in more wool from wild sheep into the production process. The idea behind it is to make something from a resource that is currently not well used. So, we have a general goal of using more Norwegian wool both in apparel textiles and in interior textiles (Beate).

This project thus allowed Eric to further co-create the idea from the Viking textile project into new opportunities. Eric's craftsmanship and industry experience makes him an important resource for his network, and he makes himself available for designer start-ups and design students through an open-door policy. By doing so, he might lose speed and capacity in his own productions because he lends out his own time, competence, staff and production equipment for others to use for free:

> Eric has opened the weaving mill for small-scale start-up designers, master students [and] high schools with projects. It is a very demanding process, and it is not where the mill earns its money (Beate).

As this account reflects, Eric constantly seeks to satisfy his network of relationships but does not expect immediate sales from these investments. By inviting in potential customers, he can do his market research at a low cost and "in house", tapping into customers' needs and preferences:

> Eric, having opened up the weaving mill [for different actors] and having been so flexible and willing, this is something that we harvest the fruits of now. And now I think we should aim for somewhat larger actors so that we have several things to rely on in addition to our existing market (Beate).

This finding is consistent with other studies, revealing that small businesses rely more on interpersonal relationships than on formal market research (Hills *et al.*, 2008; Skarderud and Kubberød, 2016). At this point in the project, Eric cannot predict the outcome of his informal research; therefore, he effectuates with what he already possesses (i.e. his knowhow), welcoming anyone interested in joining the co-creation. A designer welcomed to join in co-creation, later becoming a customer, reflected on this point:

> It's very important for me that they took me in and kind of welcomed me in this early stage, it was a smart move for them, and because of that, that's the first weaver I would include, and because I'm working on some other projects I can recommend them first to everyone else (Linda).

As these accounts reveal, cooperating more closely with stakeholders also leads to recommendations and word of mouth in the network. This resonates with the practices of relationship marketing (Berry, 1983) but deviates in terms of Eric's altruistic investments. The endorsement example revealed in the last account would probably not have taken place without Eric's altruistic investments.

4.3 Leveraging purpose and person to align pre-commitments

By analysing the process of partners committing to the process, we found that stakeholders influence the co-creation of market opportunities (Sarasvathy, 2001) because their own *purpose* aligns well with and is influential in developing Eric and Beate's *purpose*, as well. This is reflected in a supplier's commentary:

> We have the necessary transparency in relation to the production process. Value creation happens from nature and the landscape to the finish product, and they [Weaver] can build upon it. That has been their [Weaver's] focus, a criterion, and it was perhaps what made them [Weaver] think our products were exciting. It was also the reason that we thought this was exciting, because we have had contact with many businesses before, who do not have this kind of understanding (Helene).

This accords with the reasoning to have a clear *purpose*, as found in the study by Martin (2009), here functioning as a guiding element to drive the co-creation and commitment process in which stakeholders also have a say.

Furthermore, by having a deep knowledge about the handicraft of weaving and all sorts of yarns, Eric has developed a unique industry-specific experience. This expertise he gladly shares with his suppliers, as reflected in the following account:

> The start of my cooperation with Eric and his business was that he came to visit us and looked at our machinery and actually taught the head of production some things that she did not know before (laughter)… It allows us to spin wool that is otherwise very difficult to spin. It was a very rare moment because there are not many who can give us advice about spinning, but he could. It is very valuable (Sigrid).

Evidently, through altruistic co-participation and involvement in his suppliers' value-creation processes, Eric aligns the value chain actors to commit themselves in the co-creation of new offerings suiting his own needs and *purpose*. This particular example of knowledge sharing is not a stand-alone example in our data; numerous examples of Eric altruistically sharing his knowhow reveal he is a *person* investing in his stakeholders:

> I want to make the production as Norwegian as possible. Onshoring is high on the agenda, as we have outsourced all of the Norwegian manufacturing. We only have actors like Weaver who bother to take on such small projects as they have been good at taking on independent designers (Vivian)

This *practice* will eventually benefit the company in terms of future market explorations, as demonstrated by the following account, in which an affordable loss was directly employed to secure the self-selection of a customer:

> What we do with Linda is that we give her a better price for the fabric that she can try out; we give her that opportunity because it is valuable for us to have her onboard (Beate).

By leveraging the *purpose* and Eric's industry-specific knowhow, the supplier-side becomes motivated to commit themselves to explore new possibilities to learn more about opportunities in a new market for wool from ancient breeds of sheep:

> When it comes to wild sheep, obviously I want us, as a supplier, to be a part of it, if there is a market opportunity in it. I don't want that opportunity to be lost to others; we want to be a part of this (Lise).

4.4 A practice of prototyping a market through early-customer co-creation

Eric focuses on producing an early version or prototype of a product. This is reflected in Eric's view about having a concrete prototype for marketing purposes; it is also reflected in how the company collaborates experimentally with a textile designer they already know to accommodate this prototyping:

> A designer has visited the weaving mill twice; together with him, we have created many nice fabric samples for interior design and outer clothing... We need something to present so that people can touch it and get an idea. I also think it's too little to just have one design; you must have several to present (Eric).

Through altruistic market research, the company now benefits directly from these early- customer relations to develop various prototypes of woven fabrics introduced to the market for feedback. They also develop fabric prototypes in close relationships with the customers, a method which is less expensive than waterfall development, thereby reducing the risk of failing with the product:

> It has been important for Linda's firm to make some fabrics for January that she can present. But her wish is that it would be a design-driven process – that we do not produce a textile in advance, of which she buys a certain amount in metres, but that she actually gets to participate in developing a pattern or textile (Beate).

By employing experimental involvement with early customers, it is possible to explore new markets in an efficient way. This practice aids in developing products that customers already demonstrably desire; thus, a market will exist as soon as the product is introduced, rather than developing a product and then hoping the market demand will emerge via optimistic prediction. Through these interactions, Eric and his developer co-create the structure of new markets, employing the availability of those "*whom I know*" in the means set (Read and Sarasvathy, 2005; Sarasvathy, 2001). Furthermore, the focal customer becomes a pilot-customer, driving the goals and development of the new market by being onboard (Sarasvathy and Dew 2005).

4.5 Generating and harvesting serendipities as a practice for market orientation

Instead of identifying the most strategic stakeholder, Eric cooperates with people he meets on his way and through his open-door policy (Sarasvathy and Dew, 2005). By using this low-effort strategy, he maximises his possibilities for future referrals that might lead to unexpected contingencies and hence new business prospects (in which he already has a stake by being involved with them in the past). Eric generates a network effect, stimulating word of mouth from multiple sources, leading to unexpected leads from new customers:

> We have received even more interest in Norwegian wool; we had some meetings about it in Oslo with some students from the arts-and-crafts high school; there were some designers that were going to make clothes from it. They also called from the royal palace, wanting some samples of [Viking textiles] (Eric).

In addition to maximising the possibility for contingencies to occur, Eric demonstrated his ability to harvest from unexpected contingencies based on these networking activities. When one network partner made Eric and Beate aware of the market's cosplay segment, the latter decided to leverage this opportunity by deliberately following and liking such re-enactors on social media platforms:

> Sigrid told me once – you must work with unusual people [to market/sell Viking textiles], those that, for example, engage in Viking re-enactments. Suddenly, I thought – of course! So, now I "like" many Viking people on Instagram. Using Facebook or Instagram is the best possible way because otherwise they would not know that we have this fabric (Beate).

By leveraging this input and promoting the Viking textile idea through social media platforms, an unexpected market opportunity abroad also emerged:

> Some Americans will visit us on Monday. There are quite a few Norwegians that live in America, so there's a market there too. So why not make a folk costume inspired by the Viking costumes in Norway? (Eric)

In line with Engel *et al.* (2017), these accounts demonstrate Eric's ability to employ contingency in his networking practices and how he and Beate interact with user groups outside traditional market segments. Under uncertain conditions, where we do not know

which market to enter or which customers to attract, staying open to user segments and seeing what happens might be fruitful for future business.

5. Discussion

Our findings shed light on how effectual networking can inform EM and the EM practices of an owner-manager operating under market uncertainty. In the beginning, when the goals are still ambiguous and the market has not yet materialised, social interaction might itself serve as inspiration for the *process*, pursuing and operationalising a new idea in the market (Engel *et al.*, 2017; Sarasvathy and Dew, 2005).

In this study, we demonstrated that effectual networking is an engine for the owner-manager, the *person* at the core, driving the *process*, where existing means are put into play to develop a guiding *purpose* which can be promoted to attract new stakeholders outside of traditional markets. This corresponds somewhat with the findings of Stokes (2000), where the owner-manager tended to focus on the product first, and on the market second. As our study reveals, in an early uncertain phase, the focus is rather on transforming initial inspirations into a *purpose*, promoting it convincingly through storytelling and then taking this to the market for further co-creation. This is in accordance with Laaksonen *et al.* (2011), who highlighted that entrepreneurial aspirations create a *purpose* that can be leveraged. Our study also shows that *purpose*, together with the *person*'s expertise and knowhow, is used to align the actors in the value chain to commit themselves to the process of exploring new market opportunities.

Most interestingly, our research draws attention to intelligent altruism, a topic little explored in EM. In line with Van de Ven *et al.* (2007), Eric left behind a predefined plan for entering a new market that serves his own interest first; instead, he seeks a relational angle to explore future possibilities. By only investing what he can afford to lose (Sarasvathy, 2001), Eric wants knowledgeable partnerships amongst potential customers and in his value chain. Our findings consequently illustrate how Eric *practices* intelligent altruism to tap the market for new ideas, inviting potential customers and partners in for trials and experimentation. This altruistic investment leads to efficient learning about the market preferences for the owner-manager and his staff. Engaging in intelligent altruism led to many positive outcomes, including recommendations, ultimately suiting the needs of the owner-manager and his business.

EM under uncertainty is challenging when an owner-manager markets something based only on a vague idea or just a *purpose*, as in this case. This is the dilemma of marketing *practices* in early market creation. Our findings resonate with a prototyping *practice* (Trimi and Berbegal-Mirabent, 2012) that focuses on producing early versions or prototypes of a product. By co-creating product prototypes with interested potential customers, Eric and his team simultaneously co-create customer demand for future business. This *practice* resonates with a flexible and customer-centred orientation to the market, where opportunities are co-created (Whalen and Akaka, 2016; Yang and Gabrielsson, 2017), moving beyond the use of customers solely as sparring partners.

Our study reveals that the entrepreneur (i.e. *person*) employs a *practice* that exposes him to constant flows of new inputs by welcoming stakeholders into a cooperative co-creation process (Engel *et al.*, 2017). As a result, unexpected events are likely to occur during the process. In contrast to a more strategic approach of goal setting, Eric and his team employ a flexible and open orientation when confronted with new market leads (see Whalen and Holloway, 2012). Such leads can be used as *practice* for market orientation in an early phase, generating referrals and uncovering new and unusual customer segments and new product ideas. Our findings are visually conceptualised in Figure I.

As depicted in the proposed model of the EM mix under uncertainty, our study demonstrates that market uncertainty can be reduced through effectual networking, producing highly beneficial outcomes for a small business: increased commitment in the value chain, simultaneous creation of product and demand, low-cost research into customer needs and markets, established word of mouth and referrals, and discovery of new and unusual customer segments, new product ideas and new markets. Our findings emphasise the role of the owner-manager (i.e. *person*) and the *purpose* as the outset and driving force of the EM process. These two elements constitute the initial means in the means-driven EM process and are the foundation for subsequent EM *practices*. The *person*, *purpose* and *practices* interact iteratively, and effectual networking principles guide the EM *practices*.

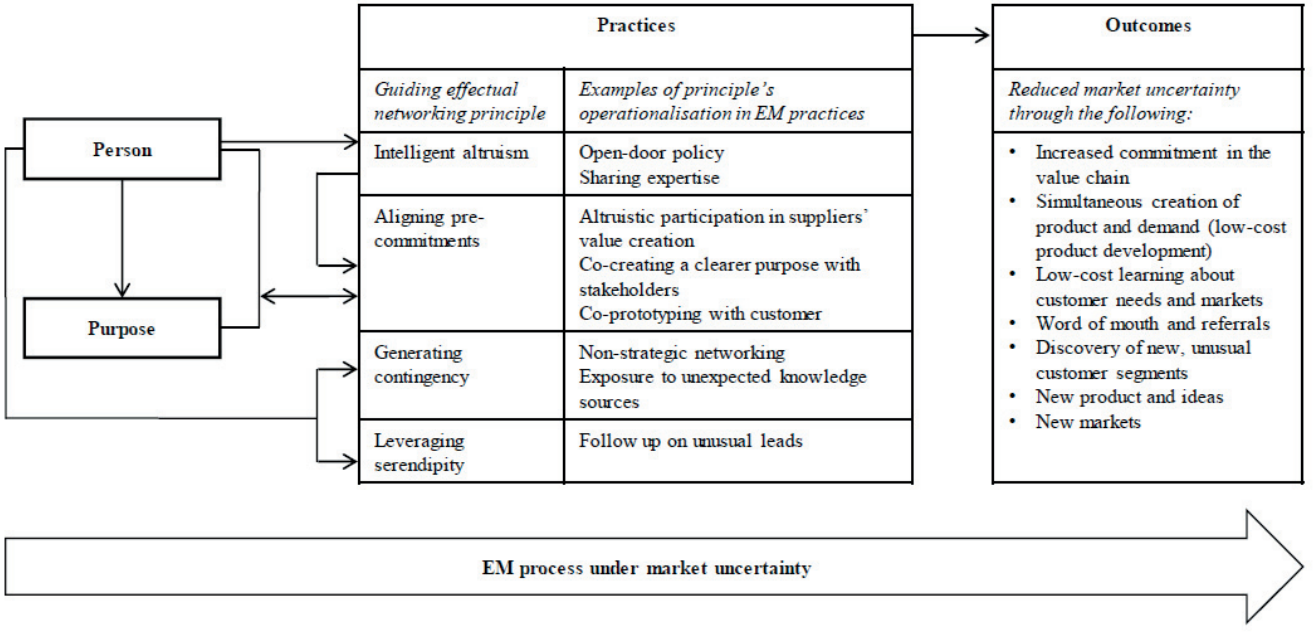

Figure I. Model of the EM mix under market uncertainty.

6. Conclusions and implications

This case study was a novel attempt to explore and conceptualise EM under uncertainty through the combination of the entrepreneurial 4Ps, the EM mix (Martin, 2009; Zontanos and Anderson, 2004) and effectual networking (Engel *et al.*, 2017), which represent a hitherto under-investigated area in the EM field. Moreover, the case study puts forward an interesting perspective on value creation as it demonstrates the potential to reinvent tradition, heritage and localness, and to position this potential within higher value products offered to new markets. Because the principles behind EM practices in small businesses are far from fully understood, we explored these in the making, distinguishing the early and uncertain phase of marketing activities for small businesses in the creative industries. Such a study contributes important insights into marketing when small businesses enter new territories where they do not possess prior market knowledge.

Our proposed model in Figure 1 particularly emphasises the role of the owner-manager (i.e. *person*), whose existing means and behaviours have a large influence on the *purpose*, setting the agenda for the business's marketing *practices*. The owner-manager's ability to attract, garner commitment from and work efficiently with stakeholders is at the core of our study, which is well in line with recent research by Resnick *et al.* (2016). As with Resnick *et al.* (2016), our study contradicted the wider literature, which suggests that relying on the SME owner-manager is insufficient. We argued that in early and uncertain phases of new market explorations outside of traditional markets, relying on a *person* with a clear *purpose* might be a good starting point.

Our study bears several theoretical and practical implications for future developments in the EM field, in particular, and small business marketing, in general. At the theoretical level, the conceptualisation of the *person* in the EM mix is evident and should be emphasised in future research, particularly in early market entry processes, where initial *practices* may be decisive for further development and marketing success. Factors such as partner commitment and the roles of intelligent altruism and contingencies are rarely studied in the EM field, and their roles in marketing under uncertainty should be further explored in future studies.

This article is based on a single embedded case study in the Norwegian wool industry; thus, further empirical case studies in other similar creative and craft-based industrial contexts are warranted to verify our themes and proposed model more rigorously (Flyvbjerg, 2006). The initial purpose of this study was not to generalise but

to provide insights into a relatively unexplored phenomenon. We lean on Flyvbjerg's (2006) argumentation to justify that even though one cannot formally generalise the knowledge from this case study to other sectors, it is likely that our findings will reflect the experiences of other creative small businesses in a similar situation. Considering the insights gained from this case study, we provide the following recommendations as inspiration for small business managers and entrepreneurs operating within similar industrial contexts when moving into new market territories:

- Act upon your initial inspiration to invite stakeholders to ideate and envision a future market of what might be, instead of setting up a market goal.
- Engage in altruistic market research practices, inviting potential customers to your facilities to interact with you. This can be a low-cost strategy to generate pilot customer relations in an early phase and under resource constraints.
- Assist your suppliers by sharing what you know and aid in their problem solving. This altruistic behaviour will commit the supplier to develop a clearer ambition and align them in co-creating a market for your future products.
- Use your early customer relations to prototype yourself into the market. This serves to reduce uncertainty and to secure future market demand.
- Be open to unexpected inputs as a form of market orientation and engage with unusual user groups because this might lead to new product ideas or new market segments.

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Viktorija Vičiūnaitė was born in Kaunas, Lithuania, in 1988. She holds a bachelor's degree in political science from Vytautas Magnus University (2011) and a master's degree in International Environmental Studies from the Norwegian University of Life Sciences (2015).

The thesis consists of an introduction and four independent research papers. The papers explore two topics in the context of the Norwegian wool industry. The first two papers explore how firms can create more attractive value propositions and communicate them better. The last two papers explore the practices of sustainability-oriented small and micro-entrepreneurs as they work to create new offerings under market uncertainty and resource constraints.

Paper 1 aims to inform sustainable business model research with a consumer preference perspective. Paper 2 studies how sustainable business models can be communicated to consumers through a translation theory lens. Paper 3 explores the role of local embeddedness in entrepreneurial learning. Paper 4 conceptualises entrepreneurial marketing under market uncertainty through principles of effectual networking.

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Errata list

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