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Sustainable business models in the grocery trade in Finland: a multiple case study

Sustainability in grocery trade - a discourse analysis

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ABSTRACT :

This paper studies sustainable business models in the Finnish grocery trade. Grocery trade has experienced changes in recent years due to the pandemic, and the impacts of sustainability are a rising trend in the 2000s. The study's theoretical background builds on defining sustainability as a phenomenon from the historical perspective. Other themes in the theoretical part of the study are sustainable strategy, and, in detail, sustainable business models. The study focuses on implementing the *Triple-layered Business model canvas (TLBMC)* framework according to the business models of case companies. The case companies of the study are the three companies with the largest market shares in the Finnish grocery trade: K Group, S Group and Lidl. The total market share of the companies consists of over 90 percent of the sales in the grocery trade.

The research method for the study is a qualitative multiple case study. The study's data is based on secondary data sources: annual reports, press releases and other documents. The empirical part of the study is formulated as within-case analyses of each case company, following a cross-case analysis of findings in all case companies. The theoretical framework for the empirical part is the *TLBMC* tool, where the findings according to the data are placed and analyzed.

The final part of the thesis comprises the discussion and conclusions of the paper. The discussion is based on the study's empirical results, where the conclusions are formed according to the analyses conducted in the empirical context. Lastly, the managerial implications and limitations of the study are presented. In addition, the suggestions for future research are covered in the last chapter of the thesis.

KEYWORDS: sustainability, business model, business model canvas, triple-layered business model canvas, grocery trade.

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1 Introduction

1.1 Motivation of the study

Sustainability as a term has been explained differently throughout it has been commonly known (Dobson, 1996). According to Crane & Matten (2007), it is a concept that aims to maintain the organizational conditions based on environmental, economic, and social aspects. Often sustainability is linked only to the environmental aspect, but recently the other parts, the economic and social perspectives, have emerged among companies (Crane & Matten, 2007).

In this thesis, sustainability is studied through business models. Business models define how the value process is created and delivered to the customers according to a company's strategy (Osterwalder & Pigneur, 2010). Moreover, a business model presents company's strategy practically (Casadesus-Masanell & Ricart, 2009). The theoretical foundation for this paper is the *Triple-layered business model canvas* founded by Joyce & Paquin (2016), which extends the business model perspective to comprise all layers of sustainability: economic, environmental, and social aspects. In addition, sustainability is described through its history as an evolving field of study to build a coherent view of sustainability and its impact on companies in the present time. The empirical part of the study builds on the framework of the *Triple-layered canvas*.

1.2 Research Gap, aim and research questions

The empirical part of the study focuses on reflecting the theoretical background of the grocery trade in Finland, which is discovered through the case companies of the study. Finland as a relatively small market area and geographically challenging country with long distances sets challenges for the distribution of products. From a sustainable perspective, these factors make Finland especially suitable for the study. Grocery industry offers an attractive context for the study as the industry is dominated by three large players in Finland (PTY, 2020). In addition, every consumer in Finland is connected with

grocery trade, which makes grocery companies' choices impactful for people's lives. It is why the industry is suitable for the aim of the study.

The case companies are K Group, S Group and Lidl. The case companies are chosen based on their remarkable market share of 92,3 % of the total sales in the grocery trade (PTY, 2020). Recently, the pandemic has shifted the global economy and shaped the business of companies operating in multiple fields. One of the most interesting fields that have shaped due to the pandemic is the grocery trade. When the pandemic occurred, people's way of doing grocery shopping changed. Consumers became interested in ordering the groceries to their homes to avoid unnecessary contact outside their homes.

The development of online grocery shopping and deliveries changed the field, and the pandemic increased sales in Finland (PTY, 2020). Therefore, the grocery trade in Finland offers an interesting field to study the business models and their sustainability. In addition, the grocery trade is among the largest fields in Finland, and every consumer is connected to the field, which makes evaluating the sustainable benefits and impacts essential from the perspective of Finnish society and the ecosystem. Grocery trade significantly impacts private consumption in Finland, and the case companies are significant employers in the Finnish society (PTY, 2020). These are both examples of the direct impacts the field has in Finland from a sustainable point of view. These factors make the study relevant to assessing these companies' sustainability work based on their business models.

The research questions for the thesis are:

RQ1. What are the key factors in sustainable strategy and business model creation for a company operating in grocery trade?

The key factors are discovered through the case companies' business models and by evaluating the business models concerning the business models of all case companies, where the study's theoretical background guides the empirical part of the study.

RQ2. How are sustainability practices impacting business models?

The practices are described through the results of the *Triple-layered Business model canvas* framework in each of the case companies. Based on the findings, similarities and differences are identified to construct a relevant view of established practices in the business models from a sustainable perspective.

1.3 Thesis structure

The objectives for the study are the following. First, the aim is to identify how sustainability practices are included in business models by the three case companies, K Group, S Group and Lidl. The theory perspective on sustainability and business models are considered when completing the objective.

Second, in the fourth chapter of the study, the findings are presented according to the case companies in the *Triple-layered Business model canvas* framework. Based on the data collected from the three large companies operating in the field, analyses are carried out to introduce how sustainability practices appear in their business models. Firstly, there are within-case analyses of the three case companies, following a cross-case analysis where the similarities and differences between the findings of the case companies are presented. The results are reflected in the theoretical part of the study to construct a deeper understanding of sustainable business models.

Lastly, chapter five includes the discussion and conclusions of how sustainability affects business models by the business model canvas of the three companies: K Group, S Group and Lidl. These three objectives presented are the key steps for answering the thesis's

research questions. Chapter five presents the implications and suggestions for future research, whereas the limitations concerning the present study.

2 Theoretical framework

This chapter focuses on building the theoretical framework for the study by introducing the key themes of the paper. These themes are presented based on the theory. The first theme, sustainability, creates the base for the theoretical framework. The other themes, sustainable strategy and its implementation, deepen the theme of sustainability to a more practical level in business. The second part of the framework focuses on business models from a sustainable perspective and, the business model canvases. The *Triple-layered business model canvas* presents the primary theoretical foundation for the paper, which the empirical part of the study reflects.

2.1 Definition of sustainability

Sustainability has become one of the most significant developing trends in companies (Chang et al., 2017). Sustainability in managing a company evolved for the first time in the 1930s, and in the 1970s, the social dimension of sustainability increased (Carroll, 1999; Chang et al., 2017; Dresner, 2008). Sustainable development refers to fulfilling the present needs so that future generations can also fulfil their needs (WCED, 1987). Therefore, sustainable development ensures equity between generations, according to Dresner (2008). Sustainability can be divided into three dimensions, which are the economic, social, and environmental aspects (Crane & Matten, 2017). However, the division into these three categories can be classified as loose, according to Purvis et al. (2019). Based on the nature of sustainability's theoretical conceptualization, which is shaped by different "school of thoughts" the limitations of the three dimensions are not strict (Purvis et al., 2019, p. 681). Nevertheless, these three dimensions comprise the components of sustainability work in a company (Crane & Matten, 2017).

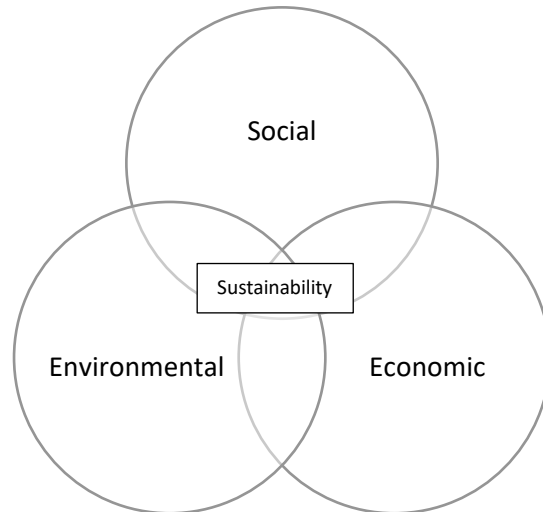


Figure 1. The three circles of sustainability.

Economic aspect

The economic aspect of sustainability refers to ensuring sustainable growth of a company instead of uncontrollable short-term growth without reasonable limits (Crane & Matten, 2007). The economic perspective on sustainability includes a company's commitment to managing its business legally and ethically right (Crane & Matten, 2007). Examples of unsustainable actions could be tax avoidance, cartel participation, or bribes (Crane & Matten, 2007).

Social aspect

The social perspective on sustainability has gained less development than economic and environmental aspects (Crane & Matten, 2007). In practice, the social aspect refers to "social justice" affected by the actions of companies (Crane & Matten, 2007, p. 27). The actions can be considered factors that create social well-being (Dillard, Dujon & King, 2009).

Environmental aspect

The environmental component of sustainability refers to resources and the management of resources in a way that is the least harmful to the biosystem (Crane & Matten, 2007). Moreover, the environmental part includes approaches toward critical business issues,

such as using non-renewable resources and the impact of production on biodiversity (Crane & Matten, 2007). Pollution and the greenhouse emissions resulting from production are part of the environmental area of sustainability (Crane & Matten, 2007).

2.1.1 The history of sustainability

The concept of sustainable development was presented for the first time through the *Brundtland Report*, also known as *Our Common Future*, published in 1987 by World Commission on Environment and Development WCED (Mebratu, 1998). However, the roots of sustainability go further. In the 1930s, the theme of social responsibility in business emerged through published articles (Carroll, 1999). After the Second World War, the rising trend of producing consumer goods in Western countries emerged, as stated by Arndt (1987), according to Purvis et al. (2019). Economic development increased the income per capita in Western countries, and in the 1950s, it was referred to as a synonym with “economic growth” (Arndt, 1987, p. 51). In 1953, the linkage between social responsibility and companies was put into theory in Howard Bowen’s book *Social Responsibilities of the Businessman* (Lee, 2008). According to Chang et al. (2017), Bowen’s view of companies’ power reaches multiple levels in their societies. Bowen’s perspective on the responsibilities of what companies have to their societies is referred widely later with corporate social responsibility (Chang et al., 2017). However, CSR was not yet recognized in the 1950s when Bowen’s book was published (Chang et al., 2017).

In the 1970s, the public discussion on the limits of economic growth was raised (Purvis et al., 2019). The environmental aspect of sustainability emerged during that time. Publications, for example, Schumacher’s *Small is beautiful* (1973), reinforced the view that consumption impacts environmental issues and the planet (Purvis et al., 2019). Mainly, the public discussion related to sustainability emerged through questioning the economic growth of Western countries, which has been arising since World War II, as the impact on social and environmental factors was recognized (Purvis et al., 2019). However, these were the first deliberations on the impacts of economic growth and what we nowadays consider sustainability.

In the 1980s, the *Brundtland report* 1987 became the synonym for the environmental view, and it increased the amount of literature in the field in the following years it was published (Purvis et al., 2019). The report enhanced the environmental aspect by defining the progress in sustainable issues as “sustainable development” (Purvis et al., 2019, p. 684). In the following decade, the Earth Summit in Rio in 1992 gathered the most influential politicians together, who gave their support to foster sustainable development (Jordan & Voisey, 1998). The Brundtland report and the Earth Summit in Rio brought sustainability into the political discussion, leaving the real actions to remain challenging (Purvis et al., 2019). For developing countries, free markets and economic growth were crucial in reducing poverty and impacting the environment (Tulloch, 2013).

In the 2000s, the term *green economy* appeared during the Fifth Ministerial Conference on Environment and Development (MCED) 2005 (Chang et al., 2017). *The Green economy* as a term refers to sustainability in the perspective of policy making (Chang et al., 2017). The Three Pillar model has commonly presented sustainability and sustainable development (see: Figure 2) since the 2000s (Purvis et al., 2019). The challenge in the model is that the three aspects of sustainability are seen as similar, whereas in reality, the goals and content of each aspect differ (Purvis et al., 2019). Also, the Three pillar model lacks a theoretical origin, which makes its credibility weak in the context of academic literature (Purvis et al., 2019). Therefore, the three circles of sustainability (see: Figure 1) have become more common when presenting the aspects of sustainability in the present time (Purvis et al., 2019).

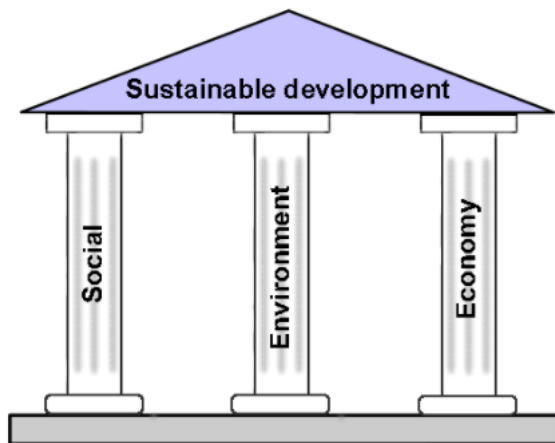


Figure 2. The Three Pillar model. (<https://ugsrp.com/2012/05/16/pillars-of-sustainability-addition-of-the-life-cycle-analysis/pillars-of-sustainability/>)

2.1.1.1 Definition of Corporate Social Responsibility (CSR)

Corporate social responsibility (CSR) refers to the relationship between companies and societies (Lee, 2008). Moreover, it focuses on companies' responsibility for their societies (Lee, 2008). CSR refers to the origin of the social aspect of sustainability, which makes the term relevant when studying sustainability. In addition, the social layer in the *Triple-layered Business model canvas* by Joyce and Paquin (2016), which will be presented in 2.4.3 of this chapter, builds for the idea of CSR.

2.1.1.2 Definition of the Triple bottom line

The Triple bottom line expands the single bottom line perspective in accounting to all layers of sustainability, and therefore the TBL is relevant for this study when evaluating sustainability through business models. The Triple bottom line means including the social and environmental aspects into measurement when evaluating a company's economic profit (Elkington, 2018). The term was introduced in 1994 by John Elkington, and the TBL was originally a tool for accounting (Elkington, 2018). Hence it is defined as an accounting framework, it is connected to companies aiming to shift their business mod-

els to be more sustainable (Hart & Milstein, 2003; Schaltegger et al., 2012). When changing business models to sustainable business models, the steadiness of the social, environmental, and economic aspects and the impact of their outcomes (Schaltegger et al., 2012). It is why the triple bottom line affects creation of sustainable business models.

The Triple bottom line consists of the social and environmental aspects besides the economic perspective; it considers all the three factors involved in doing business (Elkington, 1994). Companies' actions affect societies and the environment when aiming to create value. Since the TBL was launched, it has impacted companies' operative work, for example, in strategy, accounting, and stakeholder management (Elkington, 2018). However, the main target for the generality of companies is still to reach the targets in profit, leaving environmental and social targets secondary (Elkington, 2018).

2.2 Sustainable strategy

Sustainability in strategy can be seen from different perspectives. Sustainable strategy means actions on how a company arranges its sustainability affairs in practice (Baumgartner & Rauter, 2017). According to Emamisaleh & Rahmani (2017), sustainability can be a strategic direction, where the focus is on how a company is managing and operating its sustainability. Depending on the organization type, the goal of sustainability in the strategy is either ethical or economic (Baumgartner & Rauter, 2017). As this study focuses on the grocery trade, and profit-oriented organizations, the theoretical background comprise the sustainable strategy from the economic perspective. It consists of a sustainable strategy because sustainability creates economic profit for the company (Baumgartner & Rauter, 2017). However, economic profit is not always granted when choosing a sustainable strategy, as the central issue in sustainability usually aims to minimize the environmental or social impact (Baumgartner & Rauter, 2017). Therefore, avoiding the reductions in the economic state is essential when implementing a sustainable strategy.

Strategic sustainability orientation covers four principles: a) fulfilling the economic, social, and environmental goals, b) using sustainable resources with simultaneously considering the social and economic targets, c) applying the concept of sustainability to all levels of the organization, d) implementing the values of sustainability into company's business model (Pagell & Wu, 2009, p. 40). Strategic sustainability orientation covers the economic, social, and environmental goals (Baumgartner & Rauter, 2017). The economic aspect includes all actions related to enhancing the economic sustainability of the company's strategy (Baumgartner & Ebner, 2010). In practice, it can be making sustainability reports part of a company's economic strategy, fostering knowledge management, and including sustainability in financial decision-making processes (Baumgartner & Ebner, 2010).

2.2.1 The corporate level in sustainable strategy

Corporate sustainable strategies define how a company conducts its sustainability practices (Baumgartner & Rauter, 2017). At the corporate level, sustainability management can be divided into two different segments (Baumgartner & Rauter, 2017). The first comprises environmental and social aspects of sustainability, as they are seen as beneficial from the corporate sustainability management perspective (Baumgartner & Rauter, 2017). However, it is not defined who will benefit from the results when the corporate sustainability management is executed (Baumgartner & Rauter, 2017).

The second aspect is the difficulty in implementing sustainability management in a company (Baumgartner & Rauter, 2017). The description of sustainability can be unclear and the goals related to the subject for any form of organization (Baumgartner & Rauter, 2017). It is why defining the real purposes for sustainability implementation and its efficient execution can be challenging for companies.

According to Emamisaleh and Rahmani (2017) the external and internal factors need to be implemented and balanced when integrating sustainability into strategy. The internal factors are the company's strengths and weaknesses, as the external pressure consists

of laws and regulations and governmental and social pressure (Emamisaleh & Rahmani, 2017). However, the internal factors to sustainable strategy implementation are seen as more effective as it depends on the managerial actions and how sustainability is taken into the strategy of a company in practice (Emamisaleh & Rahmani, 2017). According to Baumgartner and Ebner (2010), sustainable corporate strategies can be categorized based on their internal or external focus. When it comes to adapting the sustainable strategy, certain characteristics, such as an open-minded attitude towards changes, a reliable atmosphere inside the company, and innovative thinking, enhance personnel to adjust to the new strategy at the operational level (Eccles et al., 2012).

2.3 The Business models

The foundation of a business model is a company's realized strategy (Casadesus-Masanell & Ricart, 2009). Therefore, when assessing the sustainability aspects of companies' strategies, business models offer a more practical way to evaluate companies' performance from a sustainable perspective. According to David Teece (2010), there has been a lack of theory in business models, making it a relatively new field of study. However, business models were seen as a *theory of a business* according to Drucker (1955), which dates to the origin of business models as a concept in the 1950s. When it comes to sustainability-related practices, changes in companies' business models are important when enhancing sustainability through innovations (Evans et al., 2017). It is why reflecting sustainability through business models in the present paper offers an interesting approach to studying the stage of sustainability in the grocery trade in Finland.

There is no clear definition of a business model (Evans et al., 2017). According to Teece (2010), a business model describes how a company creates value for its customers, how much customers are willing to pay for the obtained value, and eventually turns the payments into profit. A business model is strongly based on the value proposition of a company. According to Teece (2010), globalization has increased the competition and changed the traditional roles of customers and companies. Nowadays, customers have more choices because of technological development, and therefore, capturing value

from potential customers has become crucial for companies (Teece, 2010). A business model enables companies to deliver and capture value (Teece, 2010). Hence, business models are strongly connected to the strategy and innovation of a company (Teece, 2010). Without a clear business model, it is hard for companies to compete in the market.

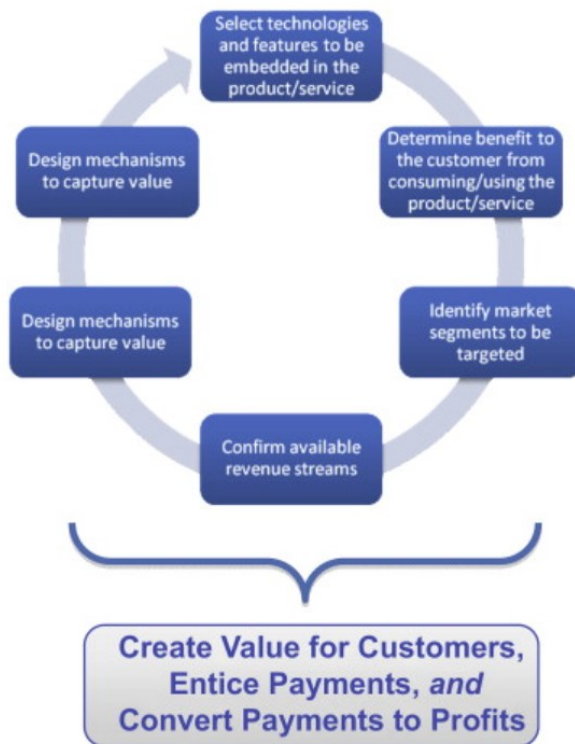


Figure 3. The elements of a business model (Teece, 2010) (<https://www.sciencedirect.com/science/article/pii/S002463010900051X#fig2>).

2.3.1 The business model canvas

Osterwalder and Pigneur (2010) presented the business model canvas in the book *Business Model Generation*. The book is designed to help companies recognize their current business models and improve or make changes to them (Osterwalder & Pigneur, 2010). The traditional business model canvas introduced by Osterwalder & Pigneur (2010) aims to identify the company's current business model by nine building blocks. These building blocks are (Osterwalder & Pigneur, 2010, p. 16-17):

1. Customer Segments (CS)
2. Value Propositions (VP)
3. Channels (CH)
4. Customer Relationships (CR)
5. Revenue Streams (RS)
6. Key Resources (KR)
7. Key Activities (KA)
8. Key Partnerships (KP)
9. Cost Structure (CS)

The business model canvas lets us evaluate the current business model by dividing it according to the nine parts introduced above. By using the canvas (see: Appendix 1) company may visualize the current business model or change the business model as, according to Osterwalder & Pigneur (2010, p. 12), the canvas represents “a shared language”. The following table introduces the main idea of each nine building blocks. The content of each building block is defined as follows.

Table 1. The business model canvas (Strategyzer, 2011).

Key Partners	Key Activities	Value Propositions	Customer Relationship	Customer Segments
The block includes the partners who help the company to act according to the company's business model.	The part includes the activities of the company, which need to be performed well to succeed according to the business model.	This part consists of services or products, that create value.	The block includes information on the relationship the company has with its customers.	The block includes all stakeholders for whom the company creates value. These segments are customers, and client companies, both one-time buyers and loyal customers.
	Key Resources		Channels	
	The part includes the crucial resources needed for the company to create value. The key resources are the necessary factors		The block defines the touchpoints where the value is delivered to the customers. These include interaction and the delivery of services or products to customers.	

	for the company to create value.			
Cost Structure		Revenue Streams		
The block includes the infrastructure components in the value creation of services or products in the applied business model.		This part defines how the pricing mechanism of the company's business model captures the delivered value.		

2.3.2 Sustainable business model

The sustainable business model enables companies to create value through the economic perspective and the environmental and social aspects. In this study, the sustainable business models are studied through the *Triple-Layered Business model canvas* introduced by Joyce and Paquin (2016).

2.4 The Triple-Layered Business model canvas

The Triple-Layered Business model canvas by Joyce and Paquin (2016) offers a unique tool to study the development of sustainable business models. *The Triple-Layered Business model canvas* (TLBMC) comprise an environmental and social layer on top of the traditional business model canvas of Osterwalder and Pigneur (Joyce & Paquin, 2016). In the TLBM canvas the horizontal and vertical aspects are also included in the analysis to build a more coherent picture of the business model analysis compared to the traditional business model innovation and canvas (Joyce & Paquin, 2016). The vertical aspect comes from assessing the relations between the three canvases, making understanding of a company's value creation deeper (Lozano, 2008; Joyce & Paquin, 2016).

The TLBMC shares the idea of the triple bottom-line approach (Joyce & Paquin, 2016) presented previously in this chapter. As the triple bottom line approach has been partially misunderstood over the years (Elkington, 2018), the TLBMC offers a clear tool to adjust business model innovation's environmental and social aspects (Joyce & Paquin, 2016). The social and environmental canvases expand the value creation of business

models from a solely economic context to a comprehensive dimension of business model creation (Joyce & Paquin, 2016). The aim of the TLBMC has also been to help companies change their business models to be sustainable, according to Joyce & Paquin (2016). However, developing business models to be more sustainable can be challenging for companies, according to Lozano (2008). The TLBMC fills this gap in companies' business model creation and change.

2.4.1 The environmental layer

The environmental layer in the TLBMC presents the lifecycle perspective (Joyce & Paquin, 2016). Lifecycle perspective means the total length of making a product, from planning and choosing the raw materials until the end of life (Joyce & Paquin, 2016). The lifecycle perspective is strongly connected with the circular economy, which represents the economy where the product lifecycle does not end (Korhonen et al., 2018). Instead, products are recycled, renewed, or reused until a new cycle (Korhonen et al., 2018). As a broader concept of sustainable view in business, the circular economy offers an alternative approach to the traditional view of the linear economy (Korhonen et al., 2018). In the circular economy, the aim is to consider the environmental impact and raise the role of sustainability in the economy (Korhonen et al., 2018). What is common with the lifecycle perspective is that in all phases of the product's lifecycle, the aim is to reduce the negative impact of making a product on the environment (Joyce & Paquin, 2016).

The environmental layer of the TLBMC reflects the lifecycle perspective through the business model and the environmental factors the business model has (Joyce & Paquin, 2016). However, the environmental layer does not include the Life cycle assessment (LCA), an analysis method where the environmental impacts of each step in the lifecycle of a product or service are evaluated (Joyce & Paquin, 2016; Muralikrishna & Manickam, 2017).

The building blocks of the environmental layer include the following factors (Joyce & Paquin, 2016):

1. Functional Value
2. Materials
3. Production
4. Suppliers and outsourcing
5. Distribution
6. Use phase
7. End-of-life
8. Environmental impacts
9. Environmental benefits

Functional value

Functional value in the environmental layer assesses the “focal outputs” of the business model in the studied company (Joyce & Paquin, 2016, p. 1478). The outputs of a service or a company should be defined according to which part of the business model is evaluated in the environmental layer (Joyce & Paquin, 2016). By limiting the examined area, the Functional value block can be discovered.

Materials

The building block creates an extension from the *Key resources* block in the economic canvas by Osterwalder and Pigneur (2010). The materials block refers to considering the environmental impact of the company’s key resources when delivering the key products or services (Joyce & Paquin, 2016). It can be done by evaluating the carbon footprint of the resources, as an example (Joyce & Paquin, 2016).

Production

The block is based on the Key activities block in Osterwalder’s and Pigneur’s (2010) economic canvas. The production block refers to the environmental approach, where the use of, for example, raw materials in the production or other steps essential for the actions in the business model are evaluated (Joyce & Paquin, 2016). The actions reviewed are the ones that have the largest effect on the environment and are considered a “core

activities” (Joyce & Paquin, 2016, p. 1478); not all actions of a company are relevant to assess in this block.

Suppliers and outsourcing

The block contains secondary actions, unlike the actions described in the previous block. The suppliers and outsourcing cover activities related to production and materials (Joyce & Paquin, 2016). These activities are crucial for the functional value block, and according to Joyce & Paquin (2016, p. 1478), the activities can be seen as “necessary but not unique”. In practice, companies do not have many ways to improve or affect these secondary activities when considering the environmental aspect, but if they are willing to affect these activities, companies need to tighten their responsibility for the activities (Joyce & Paquin, 2016).

Distribution

As in the original business model canvas, distribution consists of delivery, packaging and transportation (Joyce & Paquin, 2016). The impact of distribution on the environment is assessed (Joyce & Paquin, 2016).

Use phase

The phase represents the time when the customer uses the product or service (Joyce & Paquin, 2016). From the environmental point of view, the phase should contain repairing the product if needed, noticing possible energy use, and what the product may need to function (Joyce & Paquin, 2016).

End-of-life

This phase describes the time of the product or service when the customer chooses to end using it (Joyce & Paquin, 2016). In other words, the functional value of the product or service comes to an end in this block. In the environmental canvas, the block refers to questions on what is happening to the product or service after the product’s presumed

time frame of usage (Joyce & Paquin, 2016). The following actions may be recycling, re-using or repairing the product, as an example (Joyce & Paquin, 2016). As stated by the governments, companies should increasingly focus on taking responsibility for the end-life actions of the product or service, according to Joyce & Paquin (2016).

Environmental impacts

The block comprises the environmental costs a company creates through its actions (Joyce & Paquin, 2016). The block can be seen as an alternative way to assess costs, as the traditional business model canvas focuses on the economic costs company is facing (Joyce & Paquin, 2016). The factors evaluated as environmental costs are water or energy consumption, carbon emissions and impacts on nature and the health of humans (Jolliet et al., 2003).

Environmental benefits

The benefits considered in the environmental canvas consist of actions beneficial for the environment, similar to the economic benefits in the original canvas (Joyce & Paquin, 2016). In the environmental layer, the benefits are seen from the value creation perspective for the environment (Joyce & Paquin, 2016). For example, innovations that offer added value for the environment or, in turn, decrease the negative impact that the business of a company creates are essential in this block (Joyce & Paquin, 2016). Sustainability can be seen as a foundation for innovation in this block.

2.4.2 The social layer

In the TLBMC, the social layer is based on the stakeholder management approach (Joyce & Paquin, 2016). The social layer evaluates the social impacts of a company (Joyce & Paquin, 2016). The stakeholder management approach means combining the interests of all company stakeholders instead of aiming to fulfil the goals and needs of the company itself (Hart & Sharma, 2004). The stakeholders consist of, for example, the company's employees, shareholders, customers, suppliers and the community, everyone who impacts the company's actions or is under the influence of them (Hart & Sharma,

2004). The social layer is built on the idea of assessing the business model according to the stakeholder perspective (Joyce & Paquin, 2016).

The social layer includes the following nine building blocks (Joyce & Paquin, 2016):

1. Social value
2. Employee
3. Governance
4. Communities
5. Societal culture
6. Scale of outreach
7. End-users
8. Social impacts
9. Social benefits

Social value

The first part of the social canvas presents the factors that create value for the stakeholders and societies through their relationship and the company itself (Joyce & Paquin, 2016). A company's mission is widely connected to the stage of social value creation, and for companies acting from a sustainable perspective, the social value is likely to be part of their business models compared to companies with a minor sustainable focus (Joyce & Paquin, 2016).

Employee

The block consists of actions the company concentrates on concerning their employees; recruitment, training, and development (Joyce & Paquin, 2016). These factors impact a company's success, especially over challenging periods, and therefore employees are one of the most important stakeholder groups of a company (Joyce & Paquin, 2016). As the block of employees can be evaluated in various ways from the business model innovation perspective, the most relevant factors for the business model should be chosen

for the canvas (Joyce & Paquin, 2016). Depending on the company and the stage where the company currently is, the factors may differ between companies.

Governance

The most important factors in the governance block are the structure of a company, and the way decisions are carried out in-house (Joyce & Paquin, 2016). Depending on the company's governance, the decision-making style and stakeholder engagement are in a crucial role (Joyce & Paquin, 2016). Company type, ownership, and management style define how value is created through stakeholders in a company's governance (Joyce & Paquin, 2016).

Communities

The suppliers and communities comprise the communities' component in the social canvas (Joyce & Paquin, 2016). From the economic perspective, the role of business partners is important in the traditional business model canvas (Osterwalder & Pigneur, 2010). It is why communities are built with these two stakeholder groups, suppliers, and business partners (Joyce & Paquin, 2016). Communities can influence widely to company's success. It is why companies should pay attention to managing their relationships with their different communities, which is the core idea of this component (Joyce & Paquin, 2016). Well managed relationships can enhance a company's value creation and success in the long term (Joyce & Paquin, 2016). The relationships with suppliers can be crucial for the business if the suppliers deliver the core resources for the company (Joyce & Paquin, 2016).

Societal culture

Similarly to the previous block of the relationships with the communities, this component refers to a company's impact on the social environment largely, to societies. A company can achieve sustainable value through its business model only if society is considered, as Lozano (2008) stated. The role of Corporate Social Responsibility (CSR) can be

assessed in this block as an evaluation criterion of the company's business model (Joyce & Paquin, 2016).

Scale of outreach

The block describes the relationship the company aims to build with its stakeholders (Joyce & Paquin, 2016). The relationships can be evaluated depending on how deep and long term the relationships are (Joyce & Paquin, 2016). The block also contains decisions on the company's impact geographically on societies or country-level (Joyce & Paquin, 2016). Also, the cultural focus is among the factors that can be considered in the component (Joyce & Paquin, 2016).

End-users

The component focuses on the person who is the end-user. The consumer is the one who "consumes the value proposition" (Joyce & Paquin, 2016, p. 1481). It contains the value end-user receives from the product or service, and if it fits the end-user's needs and wishes (Joyce & Paquin, 2016). In the best way, the product or service improves "the quality of life" for the end-user (Joyce & Paquin, 2016, p. 1481). The end-users are often divided into segments according to their demographic appearance or wishes (Joyce & Paquin, 2016). However, in practice the true needs of the end-users may not be that simple, and the customers and end-users are not the same segment in every case (Joyce & Paquin, 2016).

Social impacts

Similarly, with the environmental canvas, the social impact evaluates the costs of a company's actions in the social context. However, there is no clear measurement guideline on which factors should be included in the social impact consideration (Joyce & Paquin, 2016). There are measures of social impact by UNEP (2009), but the field lacks an explicit framework for the subject, according to Joyce and Paquin (2016). Benoit-Norris et al. (2011) presented that fair competition, working hours and health and safety indicators are factors that can be considered when assessing the business model on the canvas.

Social benefits

The block contains the social factors that result from a company's actions (Joyce & Paquin, 2016). The benefits are the social value created by the company when acting according to the business model (Joyce & Paquin, 2016). Identifying these actions can help companies to add social benefits or recreate them if needed by changing or innovating the current business model (Joyce & Paquin, 2016).

3 Data and Methodology

This chapter presents the research method and data collection process chosen for the study. The main reasons and limitations concerning the chosen methods are explained. In this context, the reliability and validity of the study are also covered. Lastly, the context of the study, the grocery trade, is briefly presented, including company presentations of the case companies.

3.1 Research strategy and method

The thesis is based on a qualitative research strategy. The study's research method is a qualitative multiple case study, which contains analyses of the case companies. The research method is particularly suitable for this study, as the multiple case study method aim to investigate certain phenomena in the case companies (Yin, 1994).

The case study approach can rely on multiple data sources (Dubois & Gibbert, 2010). The data chosen for this study are secondary data sources. As the focus of the study lies on assessing the business models of the case companies from a sustainable perspective, the importance of studying certain documents, in this case, annual reports and other documents, offer a relevant basis for the use of secondary data. In addition, there are good collections of existing data, which makes secondary data applicable for this study.

According to Yin (1994), to analyse case study evidence, it is recommended to use one of the analytic strategies. For the present study, *Relying on theoretical propositions* is a suitable analytic strategy as the present study investigates sustainability in the case companies through the *Triple-layered business model canvas* framework (Yin, 1994; Joyce & Paquin, 2016).

3.2 Case selection and sample

The grocery trade in Finland is a suitable context to evaluate the sustainable practices because in Finland the distances are long due to the country's geography. It is why logistics and global supply chains have an important role since the transportation and storing of goods have an environmental impact. In addition, sustainability has become a rising trend in Finland, and in the grocery industry K Group has been nominated as the most sustainable grocery trade company several years in a row (Kesko, 2020a). These aspects make the grocery trade in Finland an attractive context for the study's aim.

The case selection is based on analysing the largest companies in the grocery trade. Therefore, the case companies chosen for the present study are K Group, S Group and Lidl, which comprise the largest market shares in the grocery trade in Finland (PTY, 2020). Evaluating the sustainability in the business models of these three companies offers an accurate and reliable sample to study the sustainable practices these companies have in their strategy, and on a more practical level, in their business models.

However, it is important to notice that the collected data is not quantitative, as, in cross-case analysis, the study approach can also be based on quantitative data (Yin, 1994). The background of the case selection is theoretical sampling since it is an appropriate method to study certain selected cases and their relationships to particular themes (Eisenhardt & Graebner, 2007). Hence, theoretical sampling is often used in studies where the purpose is to build theory; in the present study, the reasoning remains different. Choosing the case companies based on their largest market shares in the grocery trade fits the purpose of the study, which is to evaluate how sustainability appears in the business models of the three largest companies. The analysis process lies in theory testing perspective rather than building a new theory. Theory testing is a method where existing theory is tested by forming propositions (Vargas-Bianchi, 2020). The results of the empirical part are compared to the propositions to evaluate whether the theory is valid based on the findings (Vargas-Bianchi, 2020). In this study, the results are used to evaluate if the findings follow the idea of the existing theory of the *Triple-layered Business*

model canvas framework. The research questions are the foundations for the empirical study instead of propositions in the present study.

The case companies selected for the study are companies with a remarkable history and leading market positions in the grocery trade (PTY, 2020). Therefore, there are plenty of public, qualified data available. As the primary source of secondary data for the study, annual reports are reliable data, as the companies publish the reports. In addition, using secondary data enables a fair comparison between the case companies and their performance. However, the weaknesses of using secondary data as a source come from the possibility of reflecting the authors' biases, which reduces the validity. Also, the author of the annual reports remains unknown, affecting the reliability of the study. Therefore, it is important to acknowledge the role of other documents as a source of secondary data. Other documents are press releases and articles published on companies' webpages, and the author of the documents include both anonymous authors and authors with their names published.

Since the study aims to evaluate sustainability in business models, the annual reports and other secondary data documents offer an attractive, external approach for the study. In addition, the financial data of annual reports are verified from the Orbis database, which makes the economic validity of the study good.

3.3 Data collection and analysis process

According to Yin (1994), the proper process in analysing data according to the case study method is to form a matrix of categories. Further, the evidence is placed into the matrix according to the category (Yin, 1994). This process was implemented at the beginning of the data collection process, by dividing the most recent documents, mainly annual reports, according to the company, and each layer of the *Triple-layered business model canvas*. These three layers were economic, environmental, and social themes. The annual reports from the years 2019 and 2020 were the most recent publications when the data collection process took place, and it is why annual reports 2021 are not included in

the research. Other documents from the years 2021 and early 2022 are included in the present study's data.

Secondly, the relevant data were coded from the documents according to the three themes, and an analytical coding process (see: Appendix 3) was built. Based on this data, the *Triple-layered business model canvases* were formed according to each company, which is the foundation for the empirical part of the study.

The empirical part of the study consists of four analyses. Firstly, the data were analyzed following a within-case method by each case company. At the end of the process, a cross-case analysis was built, as it is especially suitable for multiple case study approaches (Yin, 1994). Using cross-case analysis increase the steadiness of the results compared to a single case study (Yin, 1994). By following the method, the reliability of the study increased. Cross-case analysis method enables to make conclusions and find similarities and differences between the cases (Yin, 1994). The cross-case analysis provides whether the results are a common phenomenon or a single occurrence (Eisenhardt & Graebner, 2007). In addition, the data collection process was completed by each case company at the same time, which increased the reliability of the data collection, and the whole study.

3.4 Grocery trade in Finland

The grocery trade in Finland is mainly led by three large companies: K Group, S Group and Lidl (PTY, 2020). The market shares between the three companies were the following (PTY, 2020, p. 9):

- K Group 36,5 % and total sales of grocery trade 6 809 million €
- S Group 46,2 % and total sales of grocery trade 8 615 million €
- Lidl 9,6 % and total sales of grocery trade 1 797 million €

Other companies in the field comprise the remaining 7,6 percent of the total market share, where Tokmanni were the fourth largest player with a 3,1 % market share (PTY, 2020). The total share of other private companies operating in the field was 3,6 % which

comprised 672 million € in sales (PTY, 2020). This share represents the share of the small and medium-sized companies' sales in the field.

Grocery trade is among the few fields where the sales increased in 2020 when Finland suffered the consequences of Covid-19 (PTY, 2020). The pandemic has offered new possibilities in the field, as grocery home delivery services have become more popular (Kesko, 2020a). The change in the field offers a new gap for companies operating in the field to increase their market shares.

Grocery trade offers employment for over 80 000 employees in Finland, and it is among the largest taxpayer industries in Finland (PTY, 2020). Grocery trade was chosen as an industry of most social responsibility for the eighth time in a row in 2019, according to PTY (2020), which is the Finnish Grocery trade association.

In Finland, the functions assigned to the grocery trade are the following:

- to offer a wide selection for consumers
- to maintain a service network across Finland
- to develop the efficiency and productivity of the food chain
- to take care of the food safety
- to control the selling of age-restricted products
- to ensure food supply and distribution also under exceptional circumstances
- Ensuring free competition and many supply channels
- Securing employment
- Consideration of environmental aspects in operation

(PTY, 2020, https://www.pty.fi/fileadmin/user_upload/tiedostot/Julkaisut/Vuosijulkaisut/FI_2020_vuosijulkaisu.pdf)

The industry has experienced changes during the last 25 years, as store selection has become more comprehensive, and the number of markets has decreased by over 30 percent (PTY, 2020). These changes result from IT development and the expansion of growth centres in Finland (PTY, 2020). Although large stores have been dominant in the grocery sales, the smaller stores are vital for serving the local demand all over Finland

and ensuring the food supply (PTY, 2020). This fact is important for the study as the industry will be studied from the perspective of sustainable business models in Finland.

3.4.1 Company presentation of K Group

K Group is a listed trading sector company operating in the grocery trade, building and technical trade and car trade (Kesko, 2022a). This study focuses on K Group's grocery business in Finland, but the company is also operating in Norway, Sweden, Estonia, Poland, Lithuania and Latvia (Kesko, 2022a). The grocery trade consists of 56 percent of the total net sales of K Group in 2020 (Kesko, 2022a). K Group were founded in 1940 as a result of four wholesale companies being merged (Kesko, 2021a).

K Group is the second-largest company in the grocery trade in Finland (Kesko, 2022b), S Group being the largest operator. K Group has four different grocery store chains: K-City-market, K-Supermarket, K-Market and Neste K (Kesko, 2022b). The net sales of the grocery trade were 5 732 million euros, and the operative profit was 375,2 million euros in 2020 (Kesko, 2020a). K Group has over 1200 stores in Finland and approximately 1000 independent K retailers (Kesko, 2022b). Over 500 K stores in Finland offer online grocery sales, K Group being the market leader in online grocery sales in Finland (Kesko, 2022b).

K Group has two own-brand labels, Pirkka and K-Menu, which offer K Group's own products (Kesko, 2020b). These products are an important part of the grocery trade selection at K Group, and, for example, Pirkka products consist of a total of 2500 products, and the number of domestic products is nearly 100 percent in some products categories, for example, in dairy products (Kesko, 2020b). It presents K Group's values where domesticity plays an important role (Kesko, 2020a).

3.4.2 Company presentation of S Group

S Group is the leader in the grocery trade in Finland, and it is a network of companies owned by customer-owners (S Group, 2022a). S Group was founded in 1904 by SOK Corporation, which is still part of the S Group (S Group, 2022b.) S Group operates in Finland and Estonia and, previously, also in Russia before the business operations were closed in April 2022 (S Group, 2022a). S Group operates in department store business, service and fuel station trade, hardware trade, and hospitality through its hotel and restaurant chains (S Group, 2022a).

S Group operates through five grocery trade chains: Prisma, S-Market, Alepa, Sale and Food market Herkku (S Group, 2020a). In 2020, the total number of stores was 965 (S Group, 2020a). The total net sales of S Group were 11 625 million euros in 2020 (S Group, 2020a), making S Group the market leader in the Finnish grocery trade. S Group has private labelled products; Kotimaista and Rainbow's own-brand products (S Group, 2020a). These products promote domesticity and affordable prices in S Group's stores (S Group, 2020a).

3.4.3 Company presentation of Lidl

Lidl is the third-largest company in the grocery trade in Finland, and the most recent player in the grocery store business, as Lidl entered the Finnish markets in 2002 (Lidl, 2022a). Lidl has expanded rapidly by opening stores all over Finland and challenging the other companies in the field by offering cheap prices (Lidl, 2022a). Currently, Lidl has nearly 200 stores and approximately 5 000 employees in Finland (Lidl, 2022b).

Lidl operates as a daughter company Lidl Suomi Ky for its German parent company Schwarz Group (Lidl, 2022a). Lidl's business consists of grocery trade in Finland, but the stores also offer consumer goods (Lidl, 2022a). Lidl has several brands in their selection of private labelled products, such as *Pohjolan Meijeri* (Martikainen, 2019). The own-

brand products comprise 75 percent of the selection at Lidl (Valkama & Jaskari, 2020), which is significantly more than the K and S Group's selections.

4 Results

This part aims to evaluate how sustainability appears in the business models of the three large players in the field. The three largest companies in the grocery trade in Finland are K Group, S Group and Lidl. The foundation for the analysis is the *triple-layered business model canvas* introduced in chapter two of the study's theoretical framework. The business models of the three large companies are presented through each of the three layers of the TLBMC: the economic, environmental, and social layers. The data and information for the canvases come from secondary data sources, which consist of annual reports, press releases and articles. Together, the canvases comprise a coherent view of the total sustainability stage in these companies.

First, there are within-case analyses of each of the three companies, where the data is presented visually in the *triple-layered canvases*, followed by a detailed analysis of each canvas. Secondly, the separate evaluation of the canvases in the case companies is presented in a cross-case analysis based on the findings from the canvases. The level of sustainability through companies' business models is evaluated and compared between the three large companies at the end of the chapter. In addition, the sustainable strategy perspective is also estimated according to companies' strategy with the findings in the business model canvases.

4.1 K Group's triple-layered business model

K Group's strategy aims to increase profitability and ensure growth to gain financial value for shareholders (Kesko, 2020a). The growth strategy includes a customer-centric view and quality as key themes (Kesko, 2020a). Sustainability is included in the strategy, especially from the economic point of view, where the focus is to minimize climate change (Kesko, 2020a). K Group has been rewarded as the most sustainable grocery trade company in the world several times, and the winning characteristics have been "transparency in sourcing, mitigating climate change and environmental care, personnel responsibility,

and extensive value creation throughout the society” (Kesko, 2020a, p. 15). In the following paragraph, sustainability’s implementation in K Group’s business model is discovered through the the *Triple-layered Business model canvas* framework to assess the integration of sustainability at a more practical level. Compared with the four principles of the sustainable strategy by Pagell and Wu (2009), K Group has succeeded to implement sustainability in their strategy and business model.

4.1.1 The economic canvas of K Group

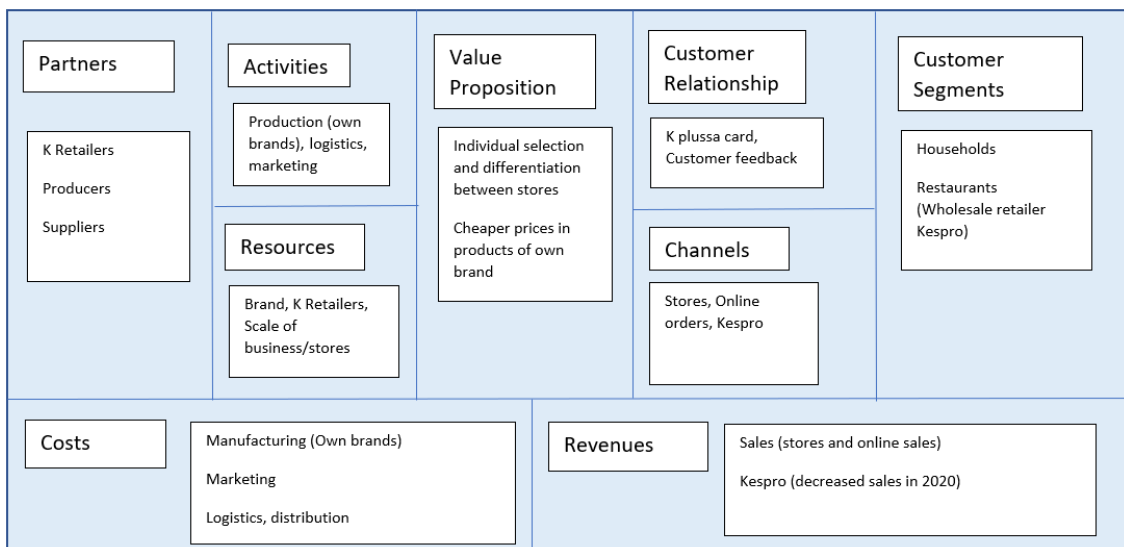


Figure 4. The economic canvas of K Group.

The customer segment block in the canvas refers to households as the target customers of K Group’s grocery chain (Kesko, 2020a). Households include all customer types, from one-time buyers to loyal customers with the K plussa loyalty card (Kesko, 2020c). K Group delivers grocery products to restaurants through its wholesale retailer Kespro (Kesko, 2020c), which makes restaurants one customer segment in K Group’s grocery business model.

The value proposition of Kesko’s economic canvas is to offer an individual selection of grocery products and differentiation between K stores (Kesko, 2020a). Also, lower prices are available for customers by selecting their own-brand’s products at K stores (Kesko,

2020a). The channels in which the value is created for K Group's customers are K stores, online grocery orders and deliveries, and Kespro's deliveries to restaurants (Kesko, 2020a).

The customer relationship segment includes customers with the K plusa card and other customers without the card (Kesko, 2020c). K Group highlights the importance of customers in its operations, and customers can wish for certain products in the selection of their K store (Kesko, 2020a). K plusa card offers unique offers, price reductions and the possibility to gain bonuses on purchases done at K stores (Kesko, 2020c). This way K Group is creating a commitment with their loyal customers. Another part of customer relationship management is to collect feedback from customers continuously, and K Group is doing it by collecting data on customer satisfaction (Kesko, 2020c).

Revenues or revenue streams are coming from the K stores and online grocery sales, which increased in 2020 due to the pandemic (Kesko, 2020d). Kespro wholesale business is also another revenue stream, in which sales decreased according to the annual report (2020a) due to the pandemic, as restaurants were closed or partially closed due to the restrictions (Kesko, 2020a).

The most important resources in the economic canvas of K Group are the organization's well-known brand and brand image. In addition, K Group's business scale is wide, and when assessing Kesko's business market in Finland, K Group has K stores all over the country (Kesko, 2020c). K Group's brand image highlights the local K stores, which can also be found in the smallest villages or neighbourhoods (Kesko, 2020c). These are all factors K Group uses in their marketing strategy (Kesko, 2020a) when indicating their brand to the consumers. The K retailers, who are individual entrepreneurs, are an important resource for K Group when operating their stores under the K Group name (Kesko, 2020a). Small entrepreneurs have the flexibility to effect on changes in small scale when creating the value, for example, by responding to the changes in demand or offering certain products in their K store's selection (Kesko, 2020c).

The activities or key activities component includes the logistics, marketing, and production of own brand's products (Kesko, 2020c). The well-functioning logistics are at the core of Kesko's activities to offer a fresh and wide selection of products at K stores (Kesko, 2020c). Marketing supports the business functions and ensures K Group's visibility to a large number of consumers all over Finland. K Group's own brand products are an important part of selecting grocery products at stores (Kesko, 2020a), which makes their production a key activity in the economic canvas.

Key partners of K Group are independent K retailers, producers, and suppliers in the economic business model canvas (Kesko, 2020c), as they ensure K Group completes its key activities. These partners enable K Group to act according to the chosen business model and towards the chosen value proposition. The cost structure of K Group comes from manufacturing-related costs, marketing, logistics and distribution (Kesko, 2020d).

4.1.2 The environmental canvas of K Group

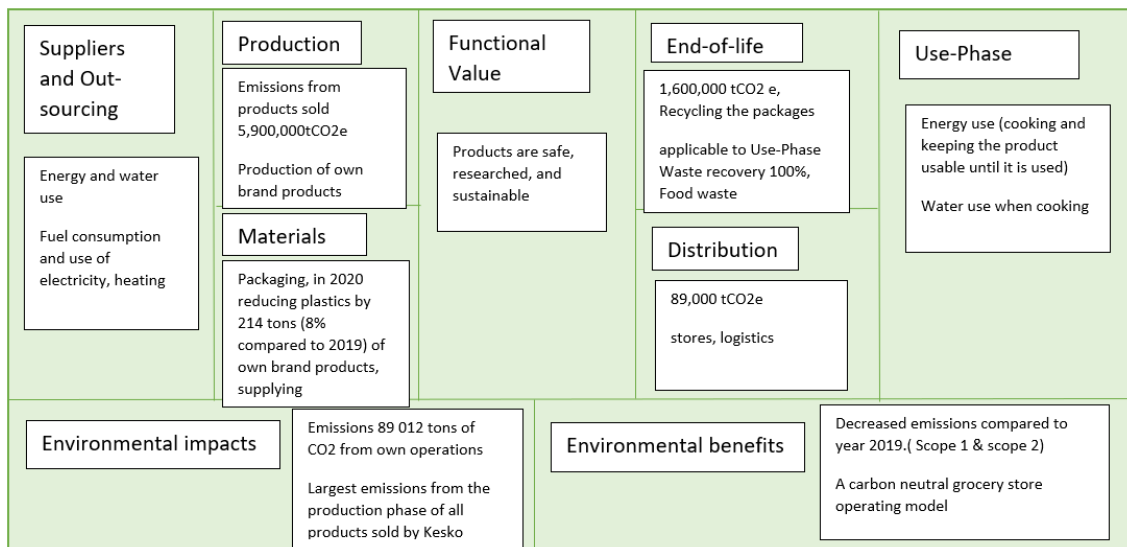


Figure 5. The environmental canvas of K Group.

In the core of K group's environmental canvas is the functional value segment. According to K group (2022a, value creation), the functional value is built on offering "safe, researched and sustainable" products to customers.

The materials component in the environmental canvas focuses mainly on packaging Kesko's own brand products, where the target is to reduce plastic in the packaging (Kesko, 2020c). Kesko released a packaging policy in 2020, where the target of using only packages made with reusable, recyclable or biodegradable materials should be achieved by 2025 (Kesko, 2020c). Compared to 2019, Kesko succeeded to reduce plastic in its packaging by 8 percent, according to the annual report (2020c). In practice, it was made by changing the material from plastic to paper, for example, in lettuce packaging (Kesko, 2020c). Other grocery products which were packaged differently were, for example, meat and dairy products, where the packaging was modified in a way that the packaging contained less plastic (Kesko, 2020c). However, in the material segment, it is important to consider also the materials used by suppliers, as K Group offers products that multiple suppliers produce alongside their own brand's products. That way supplier's role in the material segment is very important when assessing the environmental canvas of Kesko.

Producing the K Group's own-brand products is the core action of the company's production. Energy and water usage are the most important factors related to production, as the processes require both. The emissions caused by all products sold were 5,900,000 tCO₂e in 2020 (Kesko, 2020c). Kesko strictly monitors the emissions caused by their business; however, in the production segment, K Group can influence the production of its own brands more than indirectly to the production of all products sold in their stores.

The suppliers and outsourcing of K Group's canvas contains the energy and water usage by the suppliers. Most of Kesko's purchases were from Finnish suppliers in 2020 (Kesko, 2020c). It positively impacts shorter transportation distances in logistics and supports the subsistence of local farmers and producers in Finland, which is part of the social can-

was in the following part of the study. However, using local suppliers have a strong environmental impact, and Kesko's support to K retailers in choosing their own producers near their stores is unique (Kesko, 2020a; 2020c). The model enables each K retailer to build a different selection based on their customer's wishes and local products offering. The *Thank the producer* operating model ensures that smaller suppliers can have their products to K stores, which positively impacts transportation (Kesko, 2020c). Some of the products are sold under the Pirkka brand, which is one of Kesko's own brands, which makes the distribution wider as Pirkka products are sold in every K store (Kesko, 2020a). Kesko monitors its suppliers by asking the suppliers to report their climate targets and reduce their emissions (Kesko, 2020c). Kesko is part of the CDP Supply chain programme, which focuses on the environmental assessment of suppliers (Kesko, 2020c).

In 2020, Kesko launched the *Tracing our products* webpages, where consumers can track the company's own brand products' production and journey to the store in order to gain visibility of the production and transportation of K Group's products (K Group, 2020c). The distribution component in the canvas consists of logistics related to transporting the products to K stores and Kespro logistics (Kesko, 2020c). As Kesko is targeting carbon neutrality by 2025 (Kesko, 2020c), it means choosing more environmental-friendly solutions for fuel and energy consumption. When it comes to transportation and distribution, K Group is targeting zero emissions by 2030 in its own operations (Kesko, 2020c). According to the annual report (2020c), it is done by focusing on energy efficiency and the use of renewable energy. In 2020, the total emissions were 89,000 tCO₂e caused by the fuel consumption and heating and electricity used in Kesko's own facilities (Kesko, 2020c). To minimize fuel consumption, Kesko introduced two full-electric trucks for distribution in the Helsinki area in the same year (Kesko, 2020c).

The use phase of grocery products relates to energy use related to using the products, which is keeping the products usable in the correct manner, for example, in refrigerator and cooking, which both require electricity, as an example. Also, water is often required in the use phase of grocery products. Food waste and minimizing the surplus food are

essential in the use phase of grocery products. Consumers can store the food properly and support minimising food waste in stores by buying surplus food.

Kesko is selling products that are expiring soon at a reduced price and by locating them on marked last chance shelves, which has reduced food waste by 9 percent in 2020 compared to the previous year (Kesko, 2021b). Other examples of reducing the food waste are that over 90 percent of K Retailers are also donating products that are expiring to charity organizations, and there is also juice made from surplus vegetables and fruits together with a juice company Thrsty (Kesko 2020e; 2021b). In addition, gas company Gasum is turning food waste from K stores into biogas which is further used to produce Pirkka products (Kesko, 2021b). These are all factors that are in the End-of-life component of the environmental canvas.

Another perspective on the component is recycling the packages by the customers. Kesko targets reducing plastic packages, and customers should recycle the packages correctly. The materials Kesko uses are traditional packaging materials, for example, paper and plastic, which are recyclable in the waste sorting of households (Kesko, 2020c). According to the annual report (2020c), Kesko removed aluminium in specific packages, for example, Pirkka spices and baby foods, to make the packages recyclable in the end-of-life phase. Kesko uses reverse logistics in their stores to crates and beverage containers to reuse them (Kesko, 2020c). Waste recovery was 100 percent among 664 K stores and Kesko's business locations committed to the Circular economy agreement in 2020 (Kesko, 2020c). The waste recycling rate was 75 percent, more than in 2019 (Kesko, 2020c). It shows that Kesko is going in the right direction in its waste management, even though the results were not significantly better compared to the previous year. The total emissions of use and end-of-life management of sold products were 1,600,000 tCO₂ e in 2020 (Kesko, 2020c).

K Group's largest environmental impacts lie in production, transportation and logistics, and operating the stores (Kesko, 2020c). The own operations and distribution consist of

89 012 tons of CO₂ emissions presented in the distribution paragraph of this chapter. The largest emissions come from the production phase of all sold products in K stores, which makes choosing the suppliers and minimizing the environmental impacts in the production of own brand's products the most remarkable actions regarding the environmental impacts of Kesko.

The environmental benefits in Kesko's environmental canvas can be seen in reduced emissions in both scope 1 and scope 2 types compared to 2019 (Kesko, 2020c). For example, scope 1 emissions are direct emissions originating from specific machinery (Deloitte, 2022). Scope 2 emissions are indirect emissions resulting from a heating company's properties (Deloitte, 2022). In addition to reduced emission levels, Kesko's operating model toward carbon neutrality is an asset to the environment (Kesko, 2020c). However, in this canvas, we focus on benefits that are actual achievements by the year 2020, and by this, the reduced emissions are a vital factor.

4.1.3 The social canvas of K Group

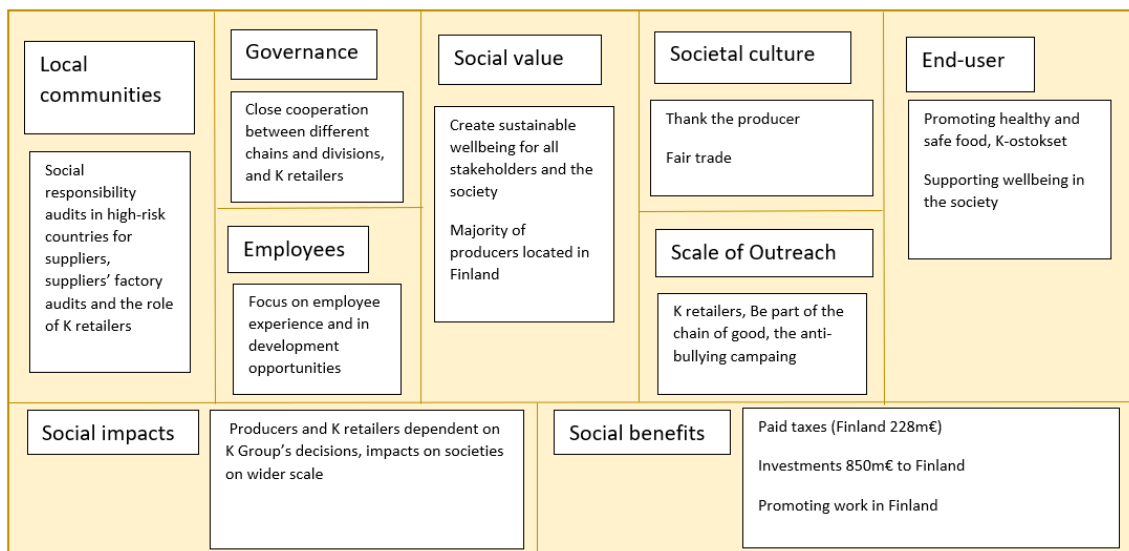


Figure 6. The Social canvas of K Group.

The social value K Group creates for its stakeholders, and the society comes from different factors. K Group supports local producers and production (Kesko, 2020c), creating

well-being for producers and the societies locally. By buying products mostly from Finnish suppliers, K Group enhances Finnish work and salary payments (Kesko, 2020a). K Group supports the well-being of their customers by offering safe food products and ensuring a wide selection of groceries (Kesko, 2020c). In addition, K Group creates social value by highlighting the sustainability aspect of their food selection, for example, by offering products with responsible labelling (Kesko, 2020c).

The employees' block at K Group refers to improving the employee experience for K Group's personnel and offering development opportunities inside the company (Kesko, 2020c). In 2020, the company paid salaries 613 million euros and training 2 million euros (Kesko, 2020a). According to the annual report (2020c), K Group focuses on competence development through training their store employees according to their training program K-Academy. The number of employees in the grocery trade of K Group was around 6 200 in 2020 (Kesko, 2020d). K Group's personnel was 10 400 employees (Kesko, 2020c). It makes K Group a significant employer in Finland, and therefore employer image is an important part of the working community work at K Group (Kesko, 2020c). In 2020, the pandemic challenged the safety requirements for employees' work conditions (Kesko, 2020c). According to the annual report (2020c), Kesko conducted several safety-related choices, such as improving air ventilation, offering protective masks, and testing personnel to maintain the working conditions as safe as possible.

The governance block at K Group represents how decisions are carried out concerning the company's stakeholders. K Group is a Finnish listed trading sector company operating in three business areas of grocery, building and car trade (Kesko, 2022b), which sets requirements for a clear governance model. K Group follows a one-tier governance model in its decision-making processes and operations (Kesko, 2020f). In the grocery trade, the key partners are the individual K retail entrepreneurs, who receive support from the K Group (Kesko, 2020f).

The local communities block includes K Group's relations with its key partners and suppliers. These are the individual K retailers and the suppliers, who are mainly Finnish, as most K Group's suppliers are in Finland (Kesko, 2020c). The K retailers consist of 49 percent of the sales revenue in Finland (Kesko, 2020a), which makes the relationship with K Group and the entrepreneurs important for the company. Concerning suppliers, K Group runs supplier's factory audits to ensure suppliers' follow the quality and regulation standards (Kesko, 2020c). In addition, for global suppliers in high-risk countries K Group runs social responsibility audits to ensure suppliers are acting in a sustainable manner (Kesko, 2020c).

The societal culture of K Groups business model refers to actions related to sustainable value creation from the social perspective. K Group has 260 Fairtrade products that impact local societies as the products aim to profit the local communities from economic and social perspectives (Kesko, 2020c). For example, the sold Fairtrade premium products enabled the renovation of schools and daycares in the local community (Kesko, 2020c). Another social program at K Group is the *Thank the producer* operating model, which gives an extra compensation for each product sold to the Finnish producer (Kesko, 2020c). K Group creates profit and value for the Finnish producers and enhances customers to buy grocery products produced in Finland.

The scale of outreach refers to the impact K Group has in different locations and communities. K Group can affect largely independent K retailers by their actions, providing support, and indirectly to local producers and farmers through their relationships with K retailers. In 2020, K Group participated the *Be part of the chain of a good* campaign, which promotes work in Finland and the important role that all stakeholders -the producers, suppliers and customers have in that chain (Kesko, 2020c).

In 2021, K Group launched a campaign of anti-bullying zones at their K stores, meaning K retailers provide shelter to bullied children and act to prevent bullying in their communities. A single K retailer originally founded the idea, but the vast K retailer network and

the support from the K Group provided the possibility to launch the idea to all K stores in Finland (Kesko, 2021c). The campaign is a concrete example of K Group's ability to have a social impact in a country-level manner. In addition, K Group supports charity work, especially children's well-being (Kesko, 2020c). K Group supports projects at the national level in Finland through its community investments and increased the number of investments in 2020 (Kesko, 2020c).

The end-user block in the social canvas represents K Group's actions of considering the health and safety of consumers when consuming the grocery products. K Group offers *K-Ostokset* service, a data-based system offering information on the nutritional content of customers' purchases and the opportunity to compare the information with nutrition recommendations (Kesko, 2020c). The system may foster customers to make better choices in their grocery shopping habits. Another health-related factor was that during the pandemic, K Group offered senior customers the possibility to shop during early morning hours to ensure their safety (Kesko, 2020a).

The social impacts on Finnish producers' and K retailers' lives are important. K Group has authority over these two partner groups, regardless of whether K retailers are independent entrepreneurs. K Groups decisions, both negative and positive, affect producers' lives, for example, if the company chooses to buy fewer products. Also, in communities where the local K market is the only store, the impacts are even more powerful for producers, employees and customers depending on the decisions K Group is conducting and on the chain and its operations.

The social benefits K Group has to societies in Finland are significant. K Group paid taxes 228 million euros in 2020 to Finland (Kesko, 2020a). In addition, K Group paid 850 million euros in investments to Finland in the same year (Kesko, 2020c). K Group's work in auditing proper ways of food production from its suppliers is beneficial for the local communities, for example, the social responsibility audits conducted in high-risk countries

(Kesko, 2020c). In Finland, investments in societies' well-being are an important part of the social welfare that K Group is enhancing.

4.2 S Group's triple-layered business model

S Group's strategy increases economic profitability and customer satisfaction (S Group, 2022c). In addition, improving performance, renewing operations, and taking responsibility for the society and the environment are values on which S Group's strategy is based (S Group, 2022c). S Group's strategy is reviewed from the practical level through the TLBMC framework in the following section.

4.2.1 The economic canvas of S Group

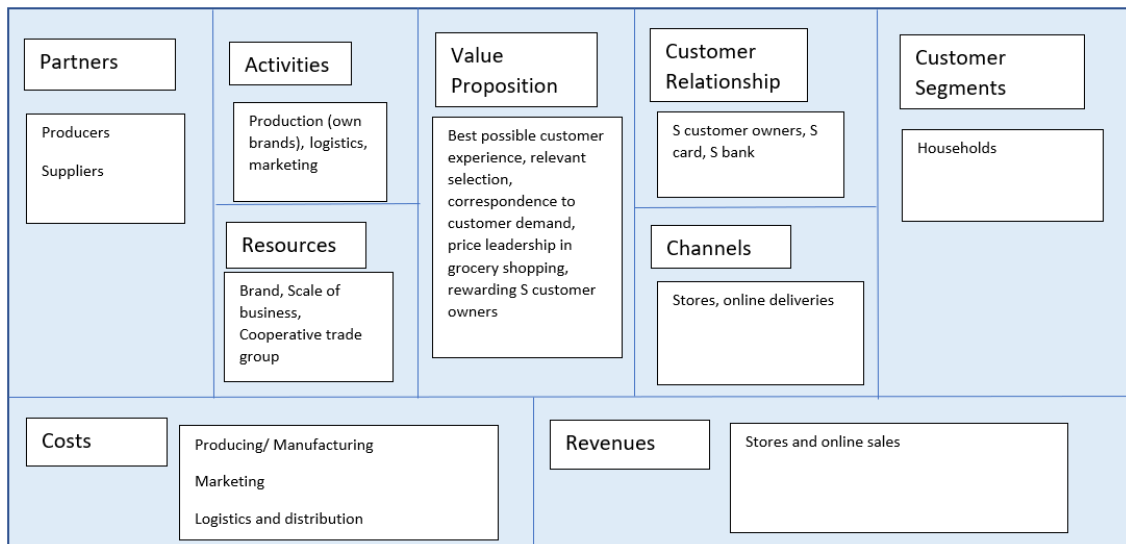


Figure 7. The economic canvas of S Group.

The customer segments block in the S Group's economic canvas lies in households, the main customers of S Group's grocery trade (S Group, 2020a). S Group's business operations include restaurant business too, but when assessing the business model of the grocery trade, the restaurant business is not included in the evaluation.

The value proposition of S Group is to offer the best possible customer experience with a relevant selection of products and correspondence to customer demand (S Group, 2019a; 2020a). S Group also targets price leadership in grocery shopping and rewards loyal customers, S customer-owners through S Group's loyalty program (S Group, 2019a; 2020a). The channels block on S Group's canvas refers to the ways value is created, and these are S Group's grocery stores and online grocery orders and deliveries to households, according to the annual report (S Group, 2020a).

The customer relationship block at S Group designates S Group's customer-owners as the company's loyal customers (S Group, 2020a). The customer owner's system is based on the co-op company type of S Group (S Group, 2020a). S Group's customer-owners have the S Group loyalty card, which lets them collect bonuses on purchases and offer price reductions (S Group, 2020a). S Group has their own bank, and the bank account can be connected to the S loyalty card (S Group, 2020a).

Revenues at S Group's grocery trade business model comes from sales at S stores and online grocery sales (S Group, 2020b). According to the SOK-Corporation's Financial Statements reports (2019b; 2020b), the sales increased by 7,8 percent compared to the previous year, 2019. The increase supported the broader trend in the grocery business in 2020 when the pandemic and its restrictions were ongoing (S Group, 2020b).

The resources block in the economic canvas includes S Group's well-known brand with several grocery chains, for example Alepa, Sale and S markets (S Group, 2020a). These chains are known all over Finland, and customers can trust to find similar shops and specific products from these grocery chains (S Group, 2020a). The business scale ensures the availability of S Group's grocery stores throughout Finland (S Group, 2020a). S Group's company type of cooperative trade group is a great resource for the company and its grocery stores (S Group, 2020b), as the scale of business is comprehensive, and the customers are connected to the company by the company type.

The activities at S Group consist of the key activities crucial for the value proposition perspective. These are producing the own-brand products, logistics to stores and distribution of groceries to households, and marketing (S Group, 2020a). Through these key activities in S Group's business model, the company creates the proposed value.

Key partners in S Group's business model are the company's producers and suppliers (S Group, 2020a). The producers ensure the selection at S Group's stores, which is one of the most important factors in the value proposition, which is the core of the business model. The suppliers impact the business model and therefore are among the key partners in the economic canvas. The cost structure in the canvas consists of producing and manufacturing-related costs, which come from the production of own brand's products (S Group, 2020b). Marketing and logistics, and distribution are other costs in the business model of S Group.

4.2.2 The environmental canvas of S Group

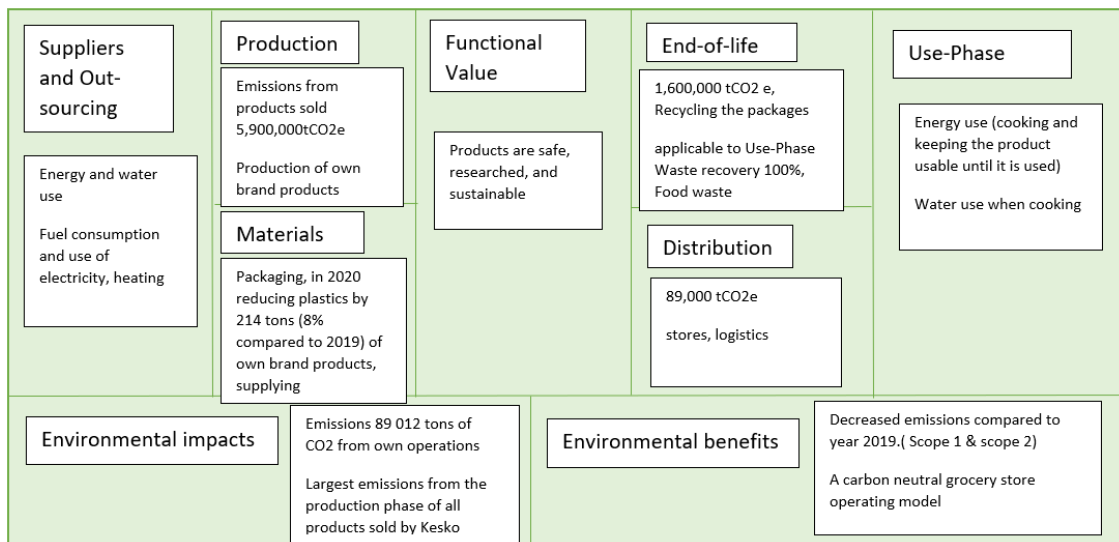


Figure 8. The environmental canvas of S Group.

S Group's functional value is built on encouraging good eating choices, and these choices are beneficial for the customers themselves, especially in terms of children's nutrition and the environment (S Group, 2020a). In addition, S Group's functional value is to offer

products that have reduced amounts of salt, sugar and fat, and it is done by focusing on these factors when producing their own brand's products (S Group, 2020a). The role of vegetables in the selection is also part of the offered value (S Group, 2020a).

The materials segment at S Group canvas focuses on decreased emissions caused by the packaging (S Group, 2020a). In 2020, the emissions decreased by 6,400 tonnes of CO₂ compared to the previous year (S Group, 2019a; 2020a). It was done by using more recycled raw materials in packaging; for example, 36 000 tonnes of virgin plastic were replaced by recycled plastic (S Group, 2020a). Eighty-three percent of S Group's own-brand's products' packages were recyclable (S Group, 2020a).

The production of S Group's own brand products, private-label products, lies on wise energy consumption (S Group, 2020a). S Group's target is to use only renewable energy by 2030 in their operations (S Group, 2020a). S Group has invested in solar panels and is the largest solar power producer in Finland, according to the annual report (2020a). Energy consumption in S Group operations has been decreasing since 2016, and it has been done through energy-efficient solutions (S Group, 2019a; 2020a). The use of electricity in production is crucial, and therefore production is mainly dependent on the environmental-friendly use of energy, directly to production lines and indirectly for heating of properties. In 2020, S Group had 79 carbon-free properties among all its properties (S Group, 2020a).

The suppliers and out-sourcing activities refer to energy and water used in the production, and fuel and use of electricity in transportation (S Group, 2020a). S Group is demanding that its largest suppliers reduce their emissions and commit to science-based environmental targets by 2023 (S Group, 2020a). It refers to positive change in suppliers' actions, which are an important part of S Group's grocery trade selection besides the private-label product range (S Group, 2020a).

The distribution component includes S Group's transportation of products to stores. In total, distribution in all S Group's transportation operations caused 133,400 TCO₂e in 2020 (S Group, 2020a). The amount includes distribution emissions in all countries, but what is important to notice, is the increase from the previous year, 2019, which was 99,600 TCO₂e (S Group, 2019a; 2020a).

The use phase of S Group's products refers to properly storing and cooking of the products, similarly to products bought from other grocery chains. This phase requires the use of energy and water. However, S Group is offering a Carbon footprint calculator available in their *S mobiili* app, and customers can evaluate the environmental impact of their grocery purchase (S Group, 2020a). The service is similar to K Group's *Tracing our products* webpage, but S Group's app offers even more individual information since the app evaluates certain products bought by the consumer.

The end-of-life block refers to recycling the packages and minimizing the food waste caused by surplus food at S Group's stores. S Group is offering recycling networks located at their stores to make recycling easy for their customers (S Group, 2020a). Some of the recycling networks offer even the possibility to recycle old clothes and small wood waste alongside waste coming from the household grocery (S Group, 2020a). S Group offers grocery products that are soon expiring at a reduced price, similarly to K Group, and in the last opening hours, the price reduction is changed from 30 percent to 60 percent to minimize surplus food (S Group, 2020a). S Group is targeting 80 percent waste recovery by 2025, and in 2020 the amount was 75 percent, according to the annual report (2020a). Compared to K Group's 100 percent waste recovery, S Group is behind the competitor in this aspect of the canvas.

The environmental impacts of S Group are the following: the emissions of S Group's own operations were 63,300 (Scope 1) and 56,400 (Scope 2) tonnes of CO₂ (S Group, 2020a). S Group is the largest energy consumer in Finland, when assessing the non-industrial

companies (S Group, 2020a). Therefore, S Group's actions towards using renewable energy have a large impact at the national level in Finland.

The environmental benefits block relies on S Groups reductions in energy consumption in 2020, which decreased from 283 to 257 kWh per gross M2 (S Group, 2019a; 2020a). As stated in the environmental impacts block, S Group's choices in their energy consumption affect largely, and therefore more environmentally friendly choices reflect the benefits company creates for the environment. Also, S Group's goal of a carbon negative company by 2025 was already beneficial in 2020, as some stores were already carbon neutral (S Group, 2020a). In addition, reduced emissions in Scope 1 and 2 compared to the previous year, 2019, are beneficial from the environmental perspective (S Group, 2019a; 2020a).

4.2.3 The social canvas of S Group

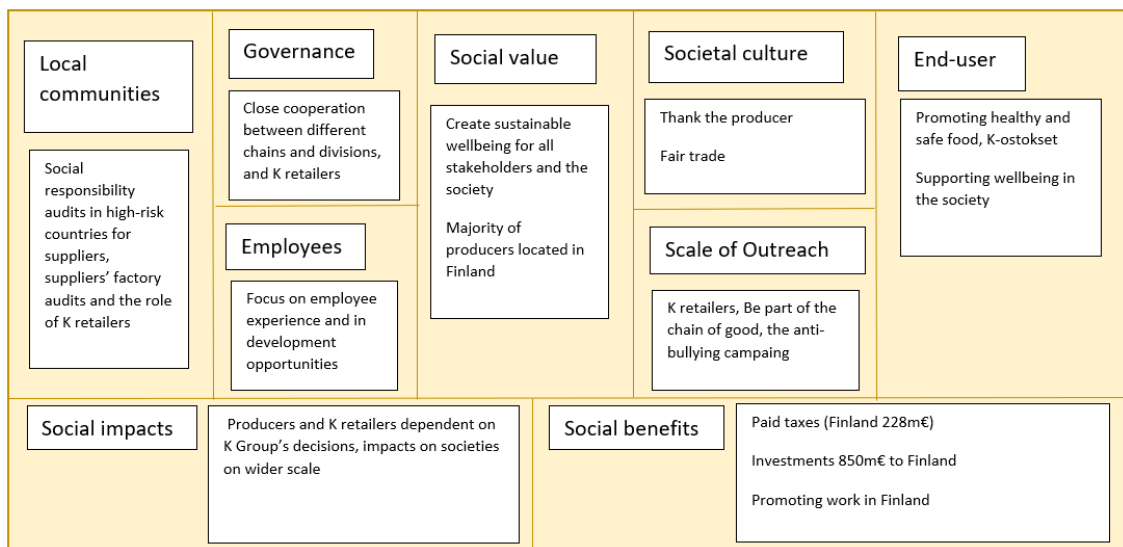


Figure 9. The Social canvas of S Group.

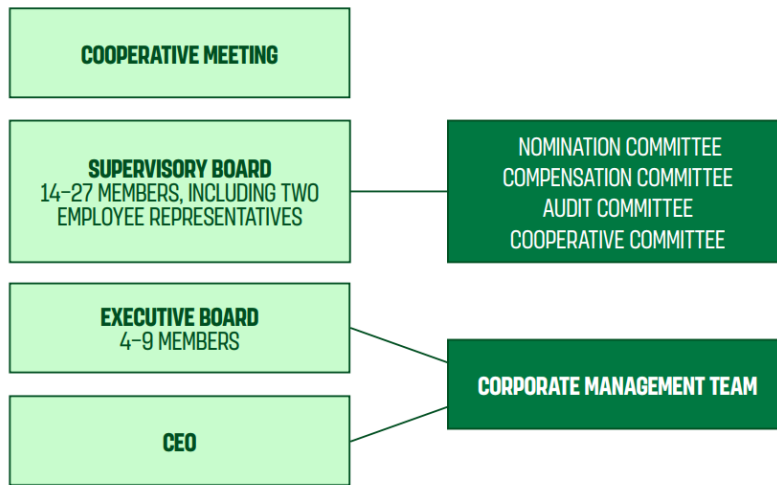
The Social value block at S Group's social canvas comes from aiming to be the most responsible organization in the grocery trade and "providing co-op members with compet-

itive services and benefits profitably” (S Group, 2020a, p. 5). Also, providing Finnish products in the grocery selection is an important part of S Group’s business, as it positively impacts employment in Finland (S Group, 2020a).

The employee block at S Group is important on the national scale, as S Group is the largest private-sector employer in Finland, with 37 000 employees (S Group, 2020a). Therefore, S Group’s decisions and employee experience have a large impact on the society in Finland. S Group is committed to fostering diversity and equity as an employer (S Group, 2020a). In 2020, there were 74 different nationalities working for S Group (S Group, 2020a), which makes it a multinational place to work. S Group is training their employees to complete a Safety passport, which includes fire rescue and first aid skills at the workplace (S Group, 2020a). The safety of employees and customers is crucial, and the Safety passport secure employees are capable of handling challenging situations if they occur (S Group, 2020a). During the pandemic, S Group has paid extra attention to the safety of both customers and employees to ensure a safe shopping experience and workplace (S Group, 2020a).

Governance at S Group refers to sharing benefits with co-op members, who are the company’s loyal customers (S Group, 2020a). The company type is joint ownership, where the management team consists of the CEO and the Executive Board of four to nine members (S Group, 2020a).

Picture 1. S Group's Governance model. (https://downloads.ctfassets.net/8122zj5k3sy9/4pDiz-IPc59eEA781TCAuvD/e6aa2d793419f66cb90b60d92df6743e/S_Group_and_Sustainability_2020.pdf)



Communities at S Group focus on local purchases and enhancing the work of Finnish producers; a majority of the grocery selection is produced in Finland (S Group, 2020a). S Group focuses on a cooperative way of doing business, fostering both economic and social responsibilities for owners and the co-op members (S Group, 2020a). It makes co-op members and loyal customers an important partner group for the organization. The core of creating the social value is to ensure the food supply all over Finland, and S Group considers their crucial role in maintaining the availability and logistics of groceries in all situations (S Group, 2020a). During the pandemic, S Group succeeded to ensure the security of supply in the grocery trade, according to the annual report (2020a).

Societal culture comes from enhancing the way social value is created, and at S Group, Finnish food plays a major role in this segment. By offering a large selection of food produced in Finland, S Group ensures Finnish work and indirectly impacts the economy in Finland (S Group, 2020a). Customers may have difficulties recognising the products of Finnish origin, and to make customers' choices easier, S Group has added *Hyvää Suomesta*-labelling to their Finnish products (S Group, 2020a).

S Group has an indirect impact on global supply chains and possible human rights violations, especially in high-risk countries (S Group, 2020a). The organization has committed to act according to the UN Guiding Principles on Business and Human rights to minimize the impact S Group may influence on ethical challenges through its supply chains. The possible violations of human rights in S Group's business partners' actions impact the local societies, as identified by S Group (2020a).

The scale of outreach at S Group lies in cooperative activities that S Group is partnering with (S Group, 2020a). In 2020, the company paid 4,5 million euros in activities that support responsible co-operations (S Group, 2020a). Through the co-op members bonus program, the company paid 358 million euros bonuses to households, which accounted 78 percent of all households in Finland (S Group, 2020a).

End-users block at the social canvas ensures the wise decisions on grocery shopping and healthy nutrition, where Finnish food plays an important role (S Group, 2020a). S Group offers a nutrition calculator, which helps consumers make better choices on their food baskets (S Group, 2020a). Children's well-being is important in this block, and S Group participates in a study module, *Trip to the store*, which teaches school-age children wise habits on consumption and food preparation (S Group, 2020a).

Social impacts lie in S Group's choices on partnering with Finnish food producers and suppliers (S Group, 2020a). Similarly with the competitors, the actions made by the organization affect both a positive and negative way to producers. Therefore, the relationship can be seen as dependent, and for example, price negotiations may be difficult for small producers with a large company.

The social benefits that S Group offers are large. In 2020, the company paid 1,8 billion euros taxes (S Group, 2020a; 2020b). S Group aims to distribute the taxes regionally, which affects positively local communities and their well-being in Finland (S Group, 2020a). S Group buys locally, which impacts employment in Finland (S Group, 2020a). In

addition, investments were made at the national level to enhance Finland's well-being and economic situation (S Group, 2020a).

4.3 Lidl's triple-layered business model

Lidl's strategy in Finland is based on gaining economic growth by rapidly expanding the scale of the business by opening new stores (Lidl, 2022b). Customer satisfaction and clear processes are at the core of the strategy, aiming to notice the social and environmental responsibility with the financial responsibility (Lidl, 2022b). Lidl has shaped the markets with low prices, but the company includes both quality and sustainability as its core values in its strategy work (Lidl, 2022b). The following section applies the TLBMC framework to Lidl's business model to build a comprehensive view of the strategy in practice.

4.3.1 The economic canvas of Lidl

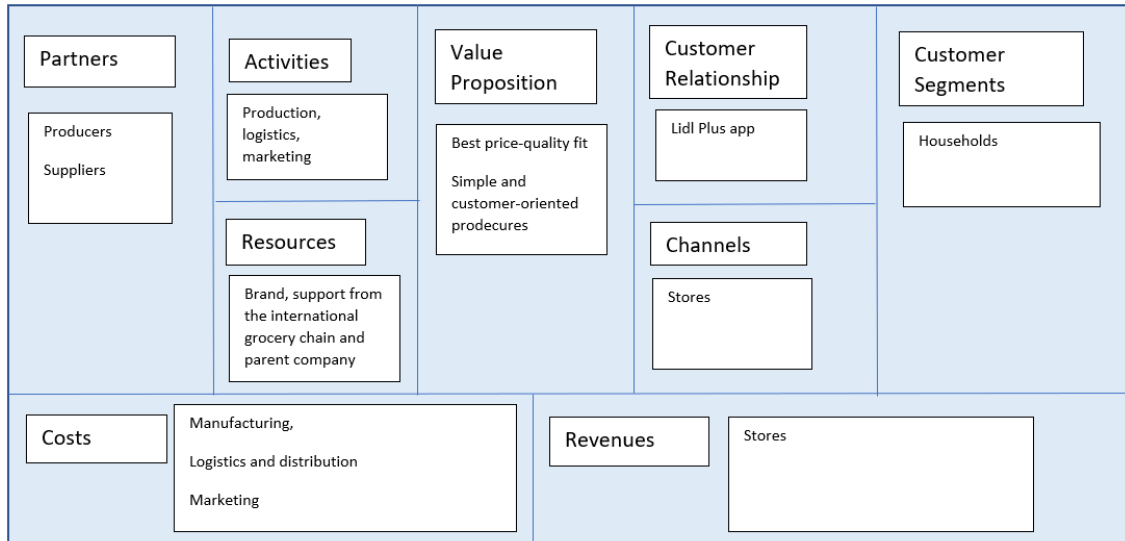


Figure 10. The economic canvas of Lidl.

The customer segment block at Lidl's economic canvas refers to households as the business model's main customers (Lidl, 2022b). The value proposition at Lidl's canvas is to offer the best price-quality fit without forgetting the sustainability aspects (Lidl, 2020a).

Part of the value proposition is to keep the procedures as simply as possible, and customer orientation is the key when planning the processes (Lidl, 2022b). The channels block consists of Lidl's stores, as traditional stores are the only place where the grocery products are sold and delivered to customers (Lidl, 2020a). Lidl Finland does not have online grocery sales (Lidl, 2020a).

The customer relationship block refers to the relationship Lidl has with its customers, where the Lidl app is an important part of this block (Lidl, 2022c). The Lidl Plus app is a benefit program that enables customers to use coupons to get price reductions and collect credits to get more price-related benefits (Lidl, 2022c). Lidl gets revenues from their stores' sales, which are the only revenue stream as online grocery sales are not part of Lidl's business model in Finland (Lidl, 2020a). The sales were 1 924 million euros in 2020, which were around 7 percent more than the previous year, 2019, when sales were 1 797 m € (Statista, 2022).

Lidl's business model resources consist of the well-known brand image, the number of stores all over Finland, and the support from the parent company, as Lidl operates as a daughter company in Finland (Lidl, 2020a). The brand image supports Lidl's value proposition of offering cheaply priced groceries, and the brand image has been shaping during the last decade Lidl has been in the Finnish markets (Lidl, 2020a). Lidl has focused on bringing Finnish products to their selection during the latest years (Lidl, 2020a), and it has been beneficial for Lidl's brand. The number of stores has been increasing continuously since 2002 when Lidl entered the Finnish grocery trade markets (Lidl, 2022a). There are Lidl stores located throughout Finland, which is a key resource for the company. Lidl's support from the parent company and the multinational chain is essential and offers an asset against the competitors. It is an important resource, even though Lidl is making country-related decisions in Finland (Lidl, 2022a).

The activities block at Lidl's economic canvas includes production, logistics or distribution and marketing as key activities for creating the company's value proposition (Lidl,

2020a). These components ensure that the value proposition is what the company aims to.

The key partners for Lidl Finland are the producers and suppliers, which enables Lidl to offer a selection of grocery products at their stores. Lidl has focused on Finnish producers during the latest years, making Finnish producers an important partner group for Lidl, without forgetting the international producers and suppliers, which also play a significant role as a partner group for the company. (Lidl, 2020a).

The cost structure is manufacturing or production, logistics and marketing at Lidl (2020a). In addition, the real estates of the stores and salary costs are also costs of Lidl's business model. However, these are not key costs in the economic business model canvas.

4.3.2 The environmental canvas of Lidl

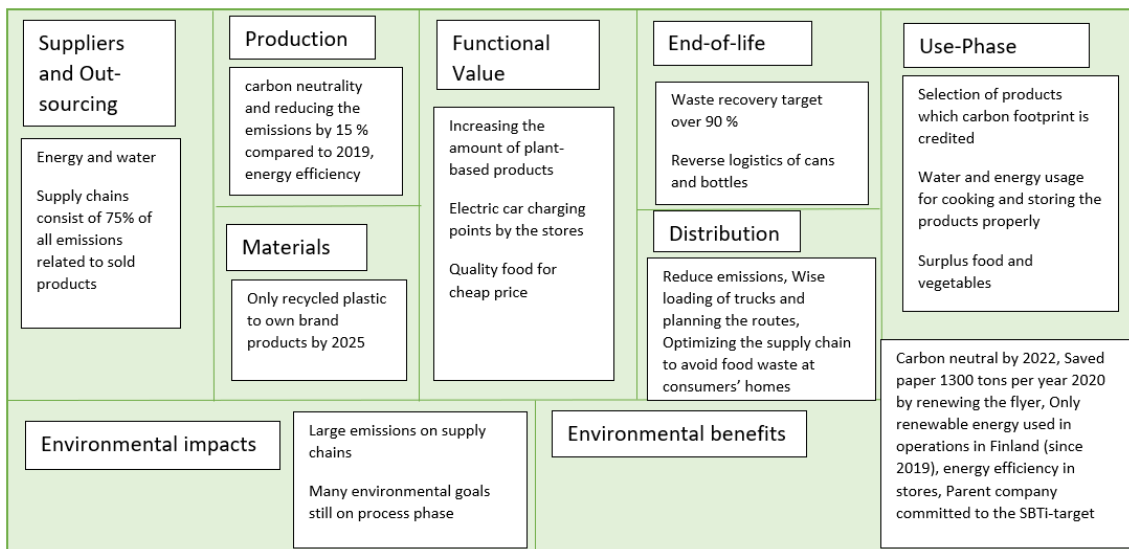


Figure 11. The Environmental canvas of Lidl.

The functional value block in Lidl's environmental canvas refers to offering quality food for a cheap price (Lidl, 2020a). In addition, Lidl is increasing the number of plant-based products in their selection for environmental reasons and offering electric car charging

points located outside their stores to support a beneficial lifestyle for the environment (Lidl, 2020a; 2022d).

The materials segment lies on the target that Lidl aims to modify all virgin plastic packages to recycled plastic in its own brand's products by the end of 2025 (Lidl, 2022e). Also, in the production phase of its own-brand products, the target is carbon neutrality and reducing the emissions by 15 percent in Finland by 2030, compared to the caused emissions in 2019 (Lidl, 2022d).

The suppliers and out-sourcing components in Lidl's environmental canvas reveal that the company's supply chains are affecting 75 percent of all emissions related to sold products (Lidl, 2022d). As Lidl is an international grocery chain, many products are supplied globally to Lidl stores in different country locations (Lidl, 2020a). Lidl's suppliers are 50 percent Finnish, 50 percent from other countries (Lidl, 2022b). It explains the large emissions related to supply chains in this component. However, Since Lidl started its business in Finland, the number of Finnish suppliers is currently five times larger (Lidl, 2022b).

Lidl's distribution block lies in its aim to decrease transportation emissions (Lidl, 2022d). The distribution refers to suppliers and transportation discussed in the previous paragraph, where Lidl's emissions related to supply chains were found to be massive. Lidl focuses on loading the trucks full, which reduces the number of distributions (Lidl, 2022f). Also, the distribution routes are planned carefully to avoid extra kilometres (Lidl, 2022f). Same trucks collect empty cans and bottles and plastic and cardboards from the stores for their return journey (Lidl, 2022f), which is part of wise route planning. The distribution planning also includes variability in the trucks used: giant trucks distribute on long-distance routes in northern Finland, and in southern Finland trucks use only bio or natural gas (Lidl, 2022f).

The use phase at Lidl consists of water and energy usage for storing the grocery products and cooking, similarly to competitors. Lidl also offers a selection of products with a credited carbon footprint, which affects the brand image positively, making it more environmental-friendly (Lidl, 2020a). Lidl is focusing on optimizing the deliveries to stores to sell as much fresh food as possible to avoid generating food waste from their products in consumers' homes (Lidl, 2022g).

Lidl focuses on minimizing food waste by offering expiring products at reduced prices at their stores (Lidl, 2022g). Lidl is the only grocery chain that offers surplus vegetables in boxes for a cheap price (Lidl, 2022g). By this, Lidl has successfully saved nearly six million kilos of surplus food in 2020 (Lidl, 2022g). In addition, unsold surplus food is donated to food aid organizations to avoid food waste (Lidl, 2022g). Lidl generated less than 1,5 percent of food waste, which is under the common target of 1,75 percent in the grocery trade (Lidl, 2022g).

The end-of-life block at Lidl includes the company's target of increasing the waste recovery level to over 90 percent (Lidl, 2020a). Like all grocery chains in Finland, Lidl offers reverse logistics at their stores for bottles and cans (Lidl, 2020a). Bio waste from the stores is produced into biogas (Lidl, 2022f).

The environmental impacts in Lidl's environmental canvas include the following factors. The large emissions caused by the supply chains are the largest negative impact on the environment (Lidl, 2022d). In addition, it can be said that many of Lidl's environmental goals are still in the process phase, especially when evaluating the current situation and recent reports of the latest years 2019 and 2020, on which the present study focuses.

The environmental benefits component focuses on actions, Lidl has done to fully become carbon neutral by 2022 (Lidl, 2020a). These actions reduce and avoid emissions and credit the caused emissions through certified climate projects (Lidl, 2022d). Lidl's parent company Schwarz Group has joined the SBTi-target, a science-based target on reducing

emissions (Lidl, 2022e). When assessing the year 2020, Lidl succeeds to save 1300 tons of paper by renewing their advertisement flyer (Lidl, 2022d). Other benefits are using renewable energy as the only energy source in Finland since 2019 (Lidl, 2022d). Lidl is paying attention to lighting, heating and refrigeration equipment at their stores to be energy efficient (Lidl, 2022d). In practice, the stores are equipped only with energy-saving led bulbs, and the refrigeration is designed to include a cover that makes them use less energy (Lidl, 2022d). Some stores have solar panels on the roofs, which the store uses as their energy source (Lidl, 2022h). Lidl received the ISO 50001 certificate for its energy-efficient actions as the first retail chain in Finland in 2016 (Lidl, 2022h).

4.3.3 The social canvas of Lidl

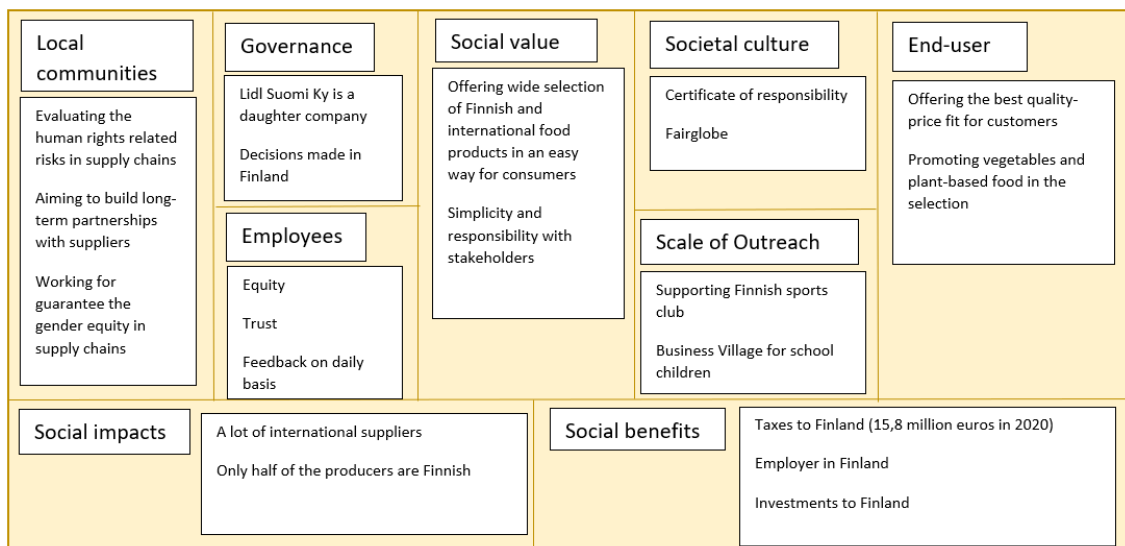


Figure 12. The Social canvas of Lidl.

The social value created by Lidl's business model comes from offering a wide selection of both international and Finnish grocery products for customers in a way that shopping at Lidl is fast, easy and effortless (Lidl, 2022b). For the company's stakeholders, Lidl aims to focus on simplicity in its actions and take responsibility for its operations (Lidl, 2022b). That way, Lidl creates social value for different stakeholder groups: employees, suppliers, producers, customers, and other partners.

Lidl, as an employer, focuses on equity and trust in its relationship with the company's employees (Lidl, 2022b). Good governance is Lidl's trust base (Lidl, 2022b). Good governance at Lidl means following Finnish law and the company's instructions in all situations, and the company uses reporting to find out possible violations (Lidl, 2022i). Simplicity is also an important part of the work guidance given to employees, and employees receive feedback based on their performance daily (Lidl, 2022i). Lidl focuses on good recruiting practices, proper training, and good governance concerning its employees and has gained Top Employer-certificates as an employer from these actions in 2019 and 2020 (Lidl, 2022i). Lidl encourages especially women to proceed in their careers (Lidl, 2022i).

Governance block at Lidl lies in company type, as Lidl is a daughter company of the German parent company (Lidl, 2020a). However, all decisions that concern Finnish business are made in Finland (Lidl, 2019; 2020a). The daughter company has an independent status, regardless of the guidance of the parent chain (Lidl, 2019; 2020a).

Lidl's role in social communities is important globally, as the company has large supply networks, and the supply chains are long for international grocery chains (Lidl, 2020a). Lidl has identified the risks related to human rights as the most impactful risks in their supply chains (Lidl, 2020b). To avoid these risks, Lidl is constantly evaluating these risks through its supply chains (Lidl, 2020b). The company is aiming to build long-term relationships with its supply chains, as it is wise from the risk management perspective, according to Lidl (2020b). Also, Lidl emphasizes that the company has more power to negotiate or improve actions related to producers or supply chains when the relationships are long (Lidl, 2020b). In addition, Lidl works to improve gender equity in its supply chains and women's position in the work-force (Lidl, 2020b). These are all actions that impact local communities based on Lidl's business model choices.

The societal culture block refers to the societal impacts of the actions in Lidl's business model. Lidl has products marked with a certificate of responsibility label, which guarantees that the producers are receiving decent compensation for their products (Lidl, 2020a). In their selection, Lidl also has Fair-Trade products marked with the Fairglobe label, which guarantees fair compensation for the producers (Lidl, 2022j).

Lidl's outreach scale consists of supporting financially local sports clubs in Finland (Lidl, 2022k). Lidl is seeking to impact their societies and their well-being in Finland and takes part in the Business village activity, a program for 6th-grade school students in Finland (Lidl, 2022k). Lidl has nine mini-Lidl stores, similar to real Lidl stores, where the students can practice real-life skills needed to act as a member of society (Lidl, 2022l). These factors represent Lidl's scale of outreach in Finland.

The end-user block in the business model of Lidl presents the value customers are receiving from Lidl's activities. Lidl is offering the best price-quality fit for their customers, which enables customers to shop for their food for a good price (Lidl, 2022b) and, therefore, may improve consumers' financial well-being. Lidl promotes the use of vegetables and offers an increasing number of plant-based options in their selection, which may improve the end-users' well-being from a nutritional perspective.

The social impacts on Lidl's social canvas come from having a lot of international suppliers, when the risk of creating indirect negative impacts on these suppliers' communities becomes higher. Especially in high-risk countries, the risks related to human rights are higher, and long supply chain networks may result in difficulties in evaluating the true status of the situation. On the contrary, Lidl has identified these challenges and is working towards controlling and evaluating the international supply chains and related risks (Lidl, 2022b). Also, the international suppliers may be dependent on receiving orders from multinational grocery chains, and the risk related to their financial situation becomes even higher if they are producing only one product and the price of the raw material changes. The social impact becomes massive in these kinds of situations.

Another impact on society can be seen in the small number of Finnish suppliers and producers for Lidl in Finland. Only half of the products are produced in Finland, which impacts the society in Finland. If the amount were higher, Lidl would create more employment in Finland.

The social benefits in the social canvas are created through the following factors. Lidl Suomi Ky's corporate taxes are paid to Finland, which was 15,8 million euros in 2020 (ePressi, 2021). Lidl is a large employer in Finland with 5500 employees and investments of 54 million euros in 2020 (ePressi, 2021; Lidl, 2020a).

4.4 Cross-case analysis

4.4.1 Economic layer

The economic canvas of K Group highlights the important role of K retailers in value creation. K Group's business idea is built on offering an individual selection of groceries at their stores, and K retailers enable the value proposition since they are in charge of choosing the selection. The economic canvas was in-built on the view of having a business model where the customer is at the core of actions. It occurs by the way K Group has arranged its key activities when collecting feedback, in their customer relationships, especially with the loyal customers and by building their way of delivering the value to the customers.

S Group's economic canvas lies in being the price leader in the grocery trade and offers a selection of grocery products that respond to the demand. S Group has the largest market share in the grocery trade in Finland, and the canvas shows their focus to fit their selection to the needs of various customer segments. It is different from K Group's business model of aiming to differentiate the stores according to customers' needs in certain store locations. S Group's co-op company type defines how the company manages its customer relationships. The loyal customers, the company's customer-owners, appear

by offering several benefits with the S loyalty card and banking services through S bank. In addition, the own-brand products are an important part of the economic canvas as a resource for the grocery selection of S Group.

Lidl's economic canvas shows Lidl's target of offering the best price-quality fit to their customers. Lidl is partnering with international suppliers to deliver the range of groceries, where approximately one half comes from global producers, and another half from Finland. This is different from competitors, as the number of Finnish suppliers is higher in K and S Group. In addition, compared to the competitors, Lidl's stores are all named according to the brand name Lidl, as K Group and S Group have similarly differentiated their stores, with several store chains. The way all stores are named as Lidl supports the clear and simple way of completing things at Lidl and the brand image of the company. Lidl does not have online sales, similarly to K and S Group, which means the revenue streams of Lidl are tight to the store business only. It makes the business model simple and different, as there is no possibility to compete directly against the competitors' in-home delivery business in the grocery trade. On the contrary, focusing fully to store sales as the only touch point strengthens the brand image of simplicity at Lidl.

4.4.2 Environmental layer

At the core of K Group's environmental canvas is decreasing the emissions and working towards carbon neutrality. K Group has succeeded to decrease their emissions, and the company has been innovative in finding ways to make its business better for the environment. Using renewable energy, reducing the use of virgin plastic, and increasing their waste recovery rate to 100 percent are all significant improvements when assessing their environmental canvas. The environmental layer in K Group's business model reveals that the company is working towards environmentally sustainable solutions, and in that work, actions towards carbon neutrality and reducing the caused emissions are the most valuable ones.

S Group's environmental layer shows that the company aims to create functional value by offering healthy choices to their customers, which results in the production phase and selection of groceries at S stores. From the environmental perspective, the most important factor is to decrease emissions and increase the number of reused materials in the packaging of products. S Group is the largest energy consumer in Finland; without assessing the industrial companies, it is obvious that S Group is largely focusing on renewable energy and its production, such as solar power.

Lidl's environmental layer focuses on carbon neutrality as its primary environmental target. Most of the company's caused emissions are coming from supply chains, which is due to Lidl's long supply chain networks and many grocery products coming outside Finland. Lidl uses only renewable energy in Finland, which is beneficial for the environment. The company is reducing the use of new plastic in the packages of their own products, similarly to the competitors. Lidl's waste recovery being under 90 percent reveals that the company is behind K Group when estimating its performance from a waste management perspective.

What is common between all three chains is the target of reducing the amount of surplus food and food waste in the grocery trade. All chains have similar practices in decreasing the amount of food waste, but Lidl's actions of reducing the prices of the soon expiring products many days ahead and offering the vegetable boxes stand out as innovative actions that are different from K's and S Group's actions.

4.4.3 Social layer

The social layer of K Group shows that the company creates broad social value in Finnish society. The value is created by mainly buying from Finnish producers and suppliers, and the local producers sell their products straight to their local K markets. In addition, being an employer in Finland, K Group creates social value for their employees and their families indirectly. K Group focuses on offering development opportunities for their employees in-house and offering support for their K retailer entrepreneurs by training. From an

international perspective, K Group focuses on ensuring proper working conditions by risk analyses in high-risk countries and offering products from different programs, such as the Fair-trade products.

The social value of the S Group comes from being a significant employer in Finland, as the S Group is the largest employer among Finnish private sector companies. The position offers responsibility for affecting Finnish people's lives, and S Group is committed to fostering equity and diversity among their work communities. S Group is a co-op company; the bonus program can be seen as remarkable as the company was paid back to their customer-owners over 350 million euros as bonuses in 2020. The customer-owners cover almost 80 percent of the Finnish population, making paid bonuses considerable to Finnish households. In addition, approximately 80 percent of S Group's products are produced in Finland, which supports employment in Finland.

Lidl's social value in Finland is created by offering employment for approximately 5500 employees and paying taxes to Finland. Similarly, with K and S Group, the paid taxes create well-being for the Finnish society. Lidl's social benefits for the producers and their communities are located more internationally than the competitors, as Lidl is partnering less with Finnish producers having approximately half of their grocery products of Finnish origin. In comparison, the rate of products coming from Finnish suppliers was 80 % in S Group and 90 % in K Group in 2020. Lidl has recognized the risks related to international and long supply chains and is paying special attention to women's human rights and working conditions. However, Lidl's impact on these societies remains indirect, as the supply chains are long, making tracking the real working conditions harder for Lidl. Building a long-lasting relationship with partners in the supply chain is important to reduce the risks.

It is common for all three companies to invest in well-being in Finland through financially supporting children's sports clubs and fostering healthy and sustainable ways of eating. It is done by offering S Group and Lidl healthy products, as S Group is minimizing the use

of salt and sugar in their own brand products. Also, the number of vegetables is increased by S Group and Lidl. Lidl also increases the amount of plant-based food in their selection as a part of their value creation. In addition, K Group's value comes from offering safe grocery products which are sustainable and safe to consume.

All three companies are also committed to enhancing the well-being of children by teaching them social skills. At Lidl, school children can practice real-life skills at their mini-Lidl education centers. At S Group, the *Trip to the store* operating model offers a similar opportunity to gain these skills. At K Group, the anti-bullying campaign creates well-being for communities by taking responsibility to intervene in situations where children are exposed to bullying.

5 Discussion and Conclusions

In this chapter, the key themes of the empirical part of the study are discussed. Based on the findings in the empirical part, the conclusions of the study are presented. Lastly, the implications, limitations and recommendations for future research are presented at the end of the chapter.

All companies, K Group, S Group, and Lidl, are paying attention to sustainability and have included sustainable practices in Finland's strategies and business models. Sustainability is implemented in each aspect according to the findings in all layers of the TLBMC in each of the case companies. Economic sustainability is at a good level in all three case companies, based on the financial situations and profitability of the companies (Orbis, 2022). All companies have established supply chain practices and partners. The business model of all three companies focuses on a customer-centric view and ensuring profitability to the shareholders. However, the activities are managed differently by the three case companies. K Group and S Group operate in the online grocery business, while Lidl focuses solely to store sales. The online grocery business as a growing field can set challenges to Lidl's market share in the future. On the contrary, being strong in the store sales and focusing strategically on increasing the sales by traditional grocery store sales can be seen as an asset, especially from the risk management perspective. What is common with all case companies is to have a loyalty program to sustain the loyal customers with the company, and it can be seen as an important factor to win customers and ensure the profitable business continues.

Based on the findings in the environmental canvases, the companies are focusing on the environmental aspect of sustainability partially differently, but there are also common practices between the companies, for example, reducing the caused emissions. The biggest differences in the environmental canvases were that the companies focused on different main targets. It causes challenges in comparing the true improvements and actions companies are performing and that the actual actions remain behind the aims. Having concrete and clear objectives is important to evaluate if the goals have been

reached. In addition, setting accurate figures is important when setting targets for reducing emissions. This was achieved in certain parts of the environmental layers of the three companies. However, based on the findings in the environmental canvases, from the environmental perspective, there were more goals and aims than concrete achievements, without forgetting the actual actions which are beneficial for the environment.

K Group's business model in the social layer creates value by supporting the Finnish producers. In the business model of S Group, the social value is created by offering employment for a significant amount of Finnish people and by paying bonuses. In the business model of Lidl, the social value creation remains smaller compared to the competitors, especially when evaluating the social benefits of the business model in Finland. However, Lidl is a large employer and taxpayer in Finland, which creates well-being for the Finnish society, although social value creation remains less significant than in the business models of K and S Group. The number of domestic products differs between companies, where K Group is the leader in offering domestic grocery products in their selection, and Lidl has the smallest number of Finnish products in their selection. All companies pay attention to international work conditions and human rights, especially on Lidl's social canvas the focus was on minimizing the risk of violations in long supply chains and international producers.

Based on the findings in the empirical part of the study, it can be said that sustainability is a common phenomenon in the Finnish grocery trade. After assessing the case companies' strategy and the business models from a sustainable perspective using the *TLBMC* framework, sustainability is evident and integrated into the case companies' strategy work and daily operations. K Group being rewarded as the most sustainable grocery store multiple times is an example of sustainable practices in the Finnish grocery trade. The empirical part of the study revealed that sustainability, as a relatively new phenomenon, had been included in the business models. However, in certain parts, the goals and aims were more common than the actual achievements, especially in the environmental

layer of the business model canvases. Although companies have implemented sustainability targets into their strategies, they have not yet succeeded in reaching all the targets. Examples of these targets are, for example, the aims of carbon neutrality and actions to increase the level of renewable energy as the primary energy source.

Lastly, to build a comprehensive view of the present study's findings, the research questions will be answered based on a summary conducted on the study's findings.

RQ1. What are the key factors in sustainable strategy and business model creation for a company operating in grocery trade?

When creating a sustainable strategy and business model, companies need to implement their actions according to sustainability's economic, environmental, and social aspects. The key factors include that all the aspects support the company's operations as a whole. For example, in the grocery trade, paying attention to the impacts of supply chains, logistics and production for the environmental aspect are crucial. The key factors come from taking responsibility for the Finnish society, companies' employees and stakeholders from the social perspective. Grocery trade being one of the most impactful fields in Finland means that the case companies operating in the field must pay attention to these factors as they significantly impact Finnish society.

RQ2. How are sustainability practices impacting business models?

Sustainability practices create more comprehensive value for companies' business models than business models where the economic perspective is the only aspect of the operations. The comprehensive value includes the value created for all company stakeholders, both directly and indirectly. From the social view, value is created indirectly by communities the company have influenced through its supply chains, as an example. From the environmental perspective, value creation comprises all practices that enable future generations to meet their needs.

5.1 Managerial implications

The present study suggests several implications based on the theoretical background and findings of the study. Implications include setting intermediate goals to aims in the business models, estimated to be reached in five or ten years. These were, for example, carbon neutrality and the use of renewable energy as the only energy source. The intermediate goals may ensure the real goals are more concrete and enable the evaluation of the current stage of the company's performance regarding the set objectives.

Evaluating and updating the goals is another implication that arises from this study. As sustainability is a relatively new field of study, and innovations are rising, it is important to renew aims instead of strictly following the existing goals of the current business model. In addition, renewing and updating the business models is important to ensure competitiveness and equivalency with competitors in the field, especially from a sustainable perspective. It ensures having a business model that corresponds to the company's needs and acknowledges the sustainable perspective.

5.2 Limitations and future research

The limitation of the present study comes from the sample size of three case companies. Involving more companies in similar studies would expand the results and make the findings more general to cover more companies operating in the grocery trade. Also, expanding the research to cover the counties of operation by these three case companies would build a more comprehensive view of the sustainability of their business models. Another path for future research would be to include Nordic countries in evaluating the sustainable strategies and business models in the grocery trade.

As the data source of the present study were secondary data sources, an alternative research suggestion would be to conduct future research by collecting interviews in the three case companies. The results could be compared with the findings in the present

study to find out if the empirical part of the study would differ as the source of the data would change.

The third possible research path for the future would be to conduct a similar case study of the three case companies and estimate whether the goals and aims of the present study have been met. This research path would offer valuable information on how reliable and relevant the sustainable goals are and how the business models change, especially when evaluated from the sustainable perspective. In addition, the grocery field as a shaping field offers interesting opportunities in the coming years for future research.

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Appendix 2. The matrix of themes/categories.

	K Group	S Group	Lidl
Economic	<p>Kesko annual report 2019 (1-296)</p> <p>Annual report Kesko's direction 2020 (1-37)</p> <p>Annual report financial review 2020 (1-147)</p> <p>Company webpage</p>	<p>Financial statements 2019 (1-75)</p> <p>Annual end responsibility report 2019 (1-82)</p> <p>Financial Statements 2020 (1-77)</p> <p>Company webpage</p>	<p>Responsibility review 2019 (1-25)</p> <p>Financial statements 2020</p> <p>Company webpage</p>
Environmental	<p>Kesko annual report 2019 (1-296)</p> <p>Annual report sustainability 2020 (1-93)</p> <p>Annual report Kesko's direction 2020 (1-37)</p> <p>Company webpage</p>	<p>Annual and responsibility report 2019 (1-82)</p> <p>Sustainability report 2020 (1-107)</p> <p>Company webpage</p>	<p>Responsibility reports 2019-2020 (1-71),</p> <p>Responsibility review 2019 (1-25)</p> <p>Company webpage</p>
Social	<p>Kesko Annual report 2019 (1-296)</p> <p>Annual report corporate governance 2020 (1-38)</p> <p>Annual report sustainability 2020 (1-93)</p> <p>Annual report Kesko's direction 2020 (1-37)</p> <p>Company webpage</p>	<p>Financial statements 2019 (1-75)</p> <p>Annual and responsibility report 2019 (1-82)</p> <p>Financial Statements 2020 (1-77)</p> <p>Sustainability report 2020 (1-107)</p> <p>Company webpage</p>	<p>Responsibility reports 2019-2020 (1-71)</p> <p>Responsibility review 2019 (1-25)</p> <p>Financial statements 2020</p> <p>Company webpage</p>

Appendix 3. The analytical coding process of the data (according to relevant themes including factors that foster sustainability in business models).

