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MANAGEMENT

Beyond Compliance

Managing the Practical Implications of the European Union's Digital
Product Passport on Companies

by

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Abstract

As the importance of sustainability grows, the necessity for authentic and transparent information in relation to this subject is becoming increasingly important. In light of this, the European Union's Digital Product Passport, surface as a timely tool to provide stakeholders with accessible and transparent information about the environmental impact of a product. Yet, due to the novelty of the DPP, a research gap emerges in comparing the intended objectives of the DPP with the actual impact on businesses affected by this regulation. The objective of this study is to investigate whether sustainability initiatives, such as the DPP, are regarded as authentic opportunities to adapt more sustainable business practices, or viewed as mere bureaucratic requirements. Subsequently, the study examines how businesses modify their strategies and operations in response to this, with the objective of identifying the perceived benefits and drawbacks of such adaptations. Furthermore, the study aims to provide valuable insights for manufacturing companies. A comparative qualitative research approach provided rich insights from two case studies, which were conducted through semi-structured interviews.

The findings of the research indicate that the DPP is perceived not merely as a requirement but rather an authentic way of facilitating more conscious decision-making and providing stakeholders with relevant information. This is due to the company's intrinsic value and a secondary benefit of enhancing brand reputation and competitiveness. The extent of strategic readjustment that companies have to implement was identified to be dependent on their already existing engagement with sustainability and the complexity of their operational processes which could impose drawbacks such as additional resource allocation. The significant advantages of these modifications were identified as enhancing consumer engagement long-term and facilitating the accessibility of information regarding sustainability.

Keywords:

The Digital Product Passport, Sustainability, Strategy, Circular Economy, Transparency, and Traceability.

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1. Introduction

When consumers have to choose a product, they often find themselves in a sea of eco-friendly labels and product claims, making it increasingly difficult to distinguish the truly sustainable products from those that are merely marketed as such (European Union Agency for Fundamental Rights, 2024). The phenomenon of marketing products more sustainable than they actually are is referred to as greenwashing, where companies mislead consumers about the environmental benefits of their products through claims about the products (European Commission, 2023). Claims which are made about a product, brand or service and relate the sustainability impact such as “carbon neutral” or “organic” but could also be more general such as “eco-friendly” or “sustainable” are often called green claims or environmental claims (Government UK, 2024). The European Commission has highlighted that a significant percentage of green claims are vague, misleading, or lack supporting evidence. Thereby increasing consumer confusion and scepticism about green marketing claims (European Commission, 2023). When sustainability is not just a minor preference anymore, the real challenge for companies goes above simply integrating environmental principles into their products. It's about transparently displaying these sustainable practices on their products to ensure that their green credentials are both visible and credible to consumers. This is crucial as the credibility of green claims significantly influences factors such as the purchase intention, willingness to pay, consumer trust, and brand equity (Chen and Chang, 2013). Yet, the mere appearance of sustainability is no longer enough as companies are forced to adapt their operational and strategic frameworks to comply with strict EU guidelines. This evolving regulatory environment requires companies to claim sustainability and to back up these claims with concrete measures and clear, verifiable information.

Initiated by the European Union, The Digital Product Passport (hereinafter DPP) which is anticipated to become operational by 2027, aims to combat greenwashing by providing verifiable, traceable, and transparent information about the environmental impact of products, thus aiding consumers in making more informed choices (Sun and Shi, 2022; Global Standards 1, n.d.). This initiative is intended to influence how companies adapt their strategies and aims to transform consumer trust and corporate accountability. By forcing all manufacturing companies

that sell goods in the EU to provide transparent information, the DPP promotes a better-informed consumer base and pushes companies towards more sustainable business practices (European Commission, 2022). However, this raises the critical question: Beyond its ambitious goals, what concrete impact does the DPP have on the companies and their internal processes? This thesis analyses in detail how sustainability initiatives such as the DPP influence business strategies, sustainability practices, and operational changes, with the aim of shedding light on its practical implications.

1.1 Problem Statement and Research Purpose

This exploratory master's thesis investigates the potential impact of the DPP on the strategic direction and operational processes of companies and aims to bridge the critical gap between the ambitious goals of the DPP and its implementation in practice. Its novelty underlines the yet unexplored need to delve into its implications and implementation for all manufacturing companies operating in the European market. According to Skillsoft (2023), companies' commitment to sustainability is driven primarily by external factors such as “customer feedback” or “government mandates or local regulations” rather than “doing the right thing” (p.5). The importance of clarifying the role of the DPP is therefore apparent as policy makers struggle to understand how sustainability efforts can be authentically implemented (Sheppard, 2011), impacting everything from global supply chains to product innovation and competitiveness. With its potential to change business strategies and product development fundamentally towards more sustainable practices, this research is particularly timely. It addresses the urgent need for companies to integrate sustainability into their core operations and analyses the DPP as an essential element in assessing the impact of regulatory frameworks on the business landscape. Consequently, the research focuses on how companies are adapting their business models in terms of sustainability practices and, if they view it necessary, make strategic and operational adjustments. It also analyses the organisational changes that companies are making to meet the requirements of the DPP, as well as the challenges and opportunities that arise from these adaptations. The aim is to develop a comprehensive understanding of how the DPP is changing sustainability practices and what steps companies are taking to prepare for the sustainability initiatives. Furthermore, this study seeks to establish a link between the theoretical ideals of

sustainability regulations and their impact on businesses. Its scope seeks to provide manufacturing companies and other stakeholders with valuable insights that can be generalised and used for further investigation of DPP's impact in particular industries and countries.

1.2 Research Questions

This thesis thoroughly examines the impact of the DPP on business practices. Given the complexity and novelty of this topic, the research questions have been carefully designed to allow for maximum flexibility in the study and to enable a thorough examination. This approach empowers this thesis to uncover nuanced insights into the strategic and operational changes that companies are facing. In line with the overarching objective of the study, the following research questions are to be answered:

- Are sustainability initiatives like the DPP regarded as opportunities to make more conscious decisions, or are they dismissed as mere bureaucratic requirements?
- What strategic and operational adjustments do companies anticipate with the introduction of the DPP? What are the expected advantages and disadvantages of such adjustments?

1.3 Delimitations

The focus of this research is limited to the geographical area of Sweden and Germany, as it involves two case studies within Swedish and German companies. This deliberate choice was made as these countries possess a diverse industry base and are known for their innovative business practices (Guay, 2014), making them ideal for studying sustainable practices in Europe. Additionally, the selection of industries is limited to the home construction and personal care industry. This focus is due to two main reasons; the DPP's effects only manufacturing companies and the yet unexplored impact it will have on these industries. Consequently the resulting conclusions will be primarily relevant to these sectors. The scope of the literature review's is tied to sustainability, strategy, and a broader understanding of the relevant departments such as marketing, product development, and supply chain.

1.4 Outline of the Thesis

This paper begins with a literature review which explores the academic discourse on sustainability initiatives, Corporate Social Responsibility, strategy and Stakeholder Theory. This provides the basis for the following sections and the theoretical framework for this study. The methodological chapter outlines the exploratory approach by conducting two case studies that include interviews with key individuals within the companies. The insights gathered from the interviews provide a comprehensive overview of the challenges and opportunities associated with the DPP. Through in-depth semi-structured interviews, this study was able to explore the impact of the DPP on organisational adaptation. Additionally, the research methodology is described, including the methods of data collection and analysis, and methodological limitations. In the empirical data section, background information on the two case studies is presented which provides a contextual understanding of their industry, leading to a more holistic perspective. Subsequently, the results of the interviews are thoroughly analysed and discussed in the context of the theoretical findings in order to answer the research questions. The paper ends with a critical reflection on the data, a discussion of the limitations of this study and suggestions for future research.

2. Theoretical Review

This chapter seeks to explore the academic discourse on current findings, models, and insights related to sustainability, strategy, and their implications in regards to the DPP. Initially, sustainability will be discussed in the context of global aspirations for sustainability and its significance in the corporate world, with a focus on Corporate Social Responsibility (CSR). This lays the groundwork for introducing the DPP and analysing its potential impact on companies. Subsequently, relevant literature on strategy will be reviewed to assess the potential influence of the DPP on business strategy and operations. Finally, these findings will then be interconnected to develop a foundational understanding of the DPP's impact on sustainability and strategy practices.

2.1 Sustainability

An ad Patagonia placed in the New York Times on Black Friday 2011 famously read: *“Don't buy this jacket”* (Patagonia, 2011). This groundbreaking and innovative advertisement underscored the urgent need for sustainable practices among businesses and tackled the issue of consumerism in a proactive manner, igniting a widespread debate on the topic. Even though sustainability has gained significant attention in the past decades due to growing recognition of its importance, the concept was already defined by the United Nations in 1987 as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, n.d.). Hence, it is crucial to consider the economic growth achieved through past environmental exploitation in order to effectively confront the challenges that lie ahead (Albino, 2013). Consequently, transitioning to a green economy, characterised by sustainable and social equality for all stakeholders, demands innovative, controversial, and transformative incentives.

2.1.1 Sustainable Practices in the Corporate World

Engaging in sustainable practices is the responsibility of every individual, even more so in the corporate context. McKinsey (2016) stated that the supply chain of consumer goods companies accounts for more than 90% of the global environmental impact on “air, land, water, biodiversity, and geological resources” (p.3), highlighting its detrimental consequences on the environment. In this paper the main concept to understand sustainability practices in the corporate world is

Corporate Social Responsibility (hereinafter CSR) as it views environmental issues as a consequence of social and economic organisational performance (Tenuta and Cambrea, 2022). CSR is a concept whereby companies integrate social and environmental concerns in their business operations (United Nation Industrial Development Organisation, n.d; Tenuta and Cambrea, 2022.) CSR is often understood as an approach through which companies can achieve the balance of economic, environmental, and social imperatives, often called the “Triple-Bottom-Line Approach” (United Nation Industrial Development Organisation, n.d.; Miller, 2023). Additionally, CSR has emerged as a key mechanism for external stakeholders to hold organisations responsible for their environmental impact. Even though it has achieved increasing attention the last couple of years, CSR has been conceptualised since the early 1950's. Carroll (1999) argues for a four-part dimensional CSR, including economic, legal, ethical, and philanthropic factors that corporations need to address in an adequate way. Furthermore, Carroll (1999) believes that the four dimensions should be equally and simultaneously fulfilled and defined as the following; “The CSR firm should strive to make a profit, obey the law, be ethical, and be a good corporate citizen” (p.289).

The accountability highlighted by CSR extends beyond mere adherence to the mandatory regulations with legal consequences; it also entails compliance with non-mandatory rules (Mintzberg, 1983). CSR has become more crucial for companies seeking to maintain their competitive advantage due to the increased accessibility of information for stakeholders. As a consequence, consumers are becoming increasingly aware of the negative environmental impacts of organisations, empowering them to choose competitors with less negative impact. Companies being accused of greenwashing, which is defined by the United Nations as “misleading the public to believe that a company or other entity is doing more to protect the environment than it is” (n.d.), have become more prominent in the past years (The Sustainability Agency, 2021). Publicly calling out companies engaged in greenwashing raises awareness of the issue and enhances accountability for larger corporations. In 2021, H&M faced allegations of greenwashing for featuring misleading sustainable claims on their labels, whereas 96% of their statements were reported as falsified (The Sustainability Agency, 2021). The potential exposure of companies for greenwashing has prompted a trend towards firms going above minimal efforts

and adopting CSR initiatives under the belief that socially responsible practices and public perception are actively rewarded by both consumers and shareholders (Skillsoft, 2023). Consequently, departments such as marketing, PR, and advertising have gained increased influence by leveraging their understanding of consumer behaviours, preferences, and needs (Gonzalez-Perez, 2013).

In addition to CSR, another framework has emerged to guide companies in managing their sustainability and ethical business efforts, namely, the ESG framework (Friede et al., 2015; Husted and Allen, 2006). ESG stands for “Environmental, Social and Governance” and represents a set of criteria used to assess a company's operations and long-term sustainability practices in the three fields of its name (Friede et al., 2015; Husted and Allen, 2006; World Economic Forum, 2020). While both CSR and ESG are focused on sustainability and have overlapping areas of environmental responsibility, social impact, and ethical practices, they differ significantly (Husted and Allen, 2006). While ESG is more specifically standardised as it includes specific measurable criteria to evaluate a company, CSR is broader (Friede et al., 2015). In addition, ESG requires formal reporting, which is sometimes integrated into financial reports (Friede et al., 2015) and its metrics are standardised, which makes companies comparable - in contrast, CSR focuses on a company's overall impact on society and the environment (Friede et al., 2015; Husted and Allen, 2006; World Economic Forum, 2020). Although CSR and ESG both seek to promote sustainability and ethical business practices, they differ in terms of application and standardisation.

2.1.2 Global Aspirations for Sustainability

The United Nations and the European Union play pivotal roles in driving the global transition towards sustainability. While sustainability is subject to various definitions and highly context-bound, researchers seem to share a mutual understanding that it involves some level of environmental, social, and economic dimension (Alexander et al., 2021). This consensus is supported by the European Commission's (2016) perspective on sustainable development, advocating for the three pillars of economic, environmental, and social sustainability. In 2015, the UN proposed the 17 Sustainable Development Goals (SDGs) as a framework for promoting

sustainability, with the intention of achieving these goals by 2030 (United Nations, n.d.) where these 17 goals were defined to “ensure sustainable consumption and production patterns” (United Nations, 2023, p.34). These SDG's make an attempt to address the most pressing global challenges and how countries should act in order to achieve a more sustainable development across all levels (United Nations, n.d.).

However, critics argue that the current corporate sustainability efforts have failed by enabling organisations to decide for themselves what type of sustainability reporting to present to the public, thereby facilitating the possibility of false claims (Archer, 2024; Visser, 2013). According to Archer (2024), corporate sustainability managers deliberately and delicately balance advertising areas of improvement without revealing challenges that are perceived as hopeless. Successfully achieving this balance is crucial to avoid accusations of greenwashing from the public (Archer, 2024). Cultivating creative solutions that break down these barriers, where organisations can no longer hide behind mere rhetoric, becomes crucial in addressing environmental concerns and redefining the concept of CSR (Visser, 2013). As proposed by the European Union, the DPP could serve as such a legislation, advocating for complete transparency and traceability of a product's lifecycle, from start to finish (Global Standards 1, n.d.).

2.1.3 Digital Product Passport

In 2022 the European Commission approved the “Proposal for Ecodesign for Sustainable Products Regulation” which, among other initiatives, included the Digital Product Passport (European Commission, 2022) which is planned to be implemented across relevant industries by 2027 (Global Standards 1, n.d.).

The DPP intends to lay out the foundation to “electronically register, process and share product-related information amongst supply chain businesses, authorities and consumers” (European Commission, 2022 p.9) and to increase transparency, traceability, and the effectiveness in transferring information between parties. This will be facilitated by scanning a

QR-code either directly on the product or on an attached tag, ensuring an user-friendly experience (European Commission, 2022).

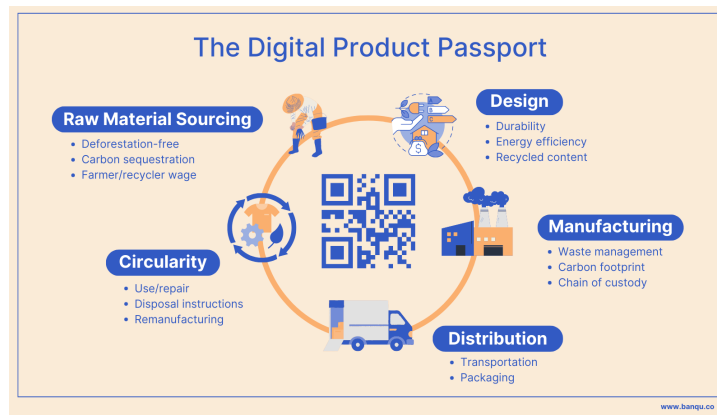


Figure 1 - Digital Product Passport (BanQu, 2023)

It is intended to allow consumers to make more aware decisions, empowering them to support companies that align with their sustainability values, while potentially disengaging with those who do not (Global Standards 1, n.d.). Furthermore, the DPP intends to create a more circular economy by providing information on repair options rather than encouraging customers to purchase brand new products, thereby advocating for circular business models (European Commission, 2022). The DPP is designed to benefit consumers and businesses, enabling them to make more informed decisions and leverage accessible information for positive environmental outcomes (PSQR, 2023). With the increased spread of information displayed by the DPP, businesses have the opportunity to influence others towards better decision-making by creating a culture of environmental consciousness throughout industries and additionally increase consumer engagement (PSQR, 2023; Global Standards 1, n.d.). Furthermore, standardised information will provide an increased efficiency of supply chain management by enabling a shared understanding of data between the producers and buyers. This will ultimately reduce costs by optimising time management and minimising the need for manual data administration, leveraging the mutual understanding of the information provided by the DPP (Global Standards 1, n.d.).

The Digital Product Passport will be introduced one industry at a time, starting with industries selling apparel, battery, and consumer electronics (PSQR, 2023). All consumer goods, excluding food, feed, and pharmaceutical products, sold in the EU market will be mandated to provide a Digital Product Passport. Consequently, the introduction of the DPP will have a global impact, affecting all companies exporting their goods to the European Market (PSQR, 2023). The European Commission (2022) emphasises that the information accessible should be straightforward for consumers, differentiated based on industry but has not yet been finalised. Although the DPP is just one of several initiatives undertaken by the European Union, it is a crucial step closer towards the goal of becoming a carbon neutral continent by 2050 (European Union, n.d.).

Furthermore, the DPP intends to improve the accessibility and credibility of environmental information on products and serves as a digitised visualisation where detailed sustainability information is easily accessible (European Commission, 2022). This way consumers can verify the sustainability claims made by manufacturers, with the hopes of leading to greater accountability and trust (Global Standards 1, n.d.). The Digital Product Passport sets out to standardise the presentation of sustainability data and make it easily accessible, effectively clarifying the authenticity of green claims (European Commission, 2022). As a result, the DPP provides the consumer with a comprehensive understanding of the environmental impact of a product, not solely only in relation to the product itself, but all green claims associated with the item (European Commission, 2023). The objective is to mitigate the impact of false environmental claims “by ensuring that buyers receive reliable, comparable and verifiable information to enable them to make more sustainable decisions and to reduce the risk of greenwashing” (European Commission, 2023, p.1).

Affected Departments

The adoption of the DPP has a significant impact on various departments within an organisation, requiring a department-specific analysis to fully understand the scope of these impacts. This paper highlights the central role of the marketing, product development, and supply chain departments in adapting to the DPP.

In the field of marketing, the DPP potentially influences the way products are presented and promoted to consumers and business partners. Based on this, marketing strategies should communicate not solely the value of products but their compliance with the sustainability standards that the DPP requires (Straus and Frost, 2013; Grönroos, 1990). This change requires adjustments to packaging and the careful selection of green claims to meet the requirements of the DPP, where transparency is crucial (Armstrong and Kotler, 2015).

The DPP also significantly influences product development as it introduces new parameters for product design and development that incorporate sustainability from the conceptualisation phase to market launch and post-launch feedback (Grossman and Helpman, 1989; Krishnan and Ulrich, 2001). The DPP's requirements for comprehensive product information necessitate innovation in product design and demand that end-of-life recyclability and environmental impacts are considered at the earliest stages of product conceptualisation (Global Standards 1, n.d.).

The supply chain and procurement processes are essential to the implementation of the DPP, as they control not only the flow of products from creation to final delivery, but additionally, the sourcing of all ingredients and raw materials required to manufacture a product (Power, 2005; Lysons and Farrington, 2016). The DPP requires improved data management to track and verify the sustainability claims of materials and products throughout the supply chain (European Commission, 2022). This shift could optimise supply chain operations and align them with broader sustainability goals, making the procurement process a key focus for integrating environmental and ethical considerations into business strategies (Cox, 1999).

Understanding these departmental impacts is critical for organisations that want to utilise the full potential of the DPP. It ensures regulatory compliance and provides strategic direction towards greater sustainability and market differentiation. The departmental response to the DPP can act as a driving factor for wider organisational change, embedding sustainability into the core of the business and increasing long-term value creation.

2.2 Strategy

A well-defined strategy can be seen as the overall guide that steers organisations and supports the successful management of organisational challenges and complex markets. The universality of strategy in guiding organisations - from sport teams to multinational corporations - through different landscapes is unmistakable (Mintzberg, 2011). Despite the works of prominent scholars such as Ansoff (1965) and Mintzberg et al., (1998), no single, universally accepted definition of strategy has been identified (Campbell and Alexander, 1997), which will be further elaborated on in the following section. The importance of strategy in the business context is much greater than mere market competition as it also includes the integration of broader societal needs into the corporate framework (Porter and Kramer, 2006). Freedman (2013) argues that strategy is a anticipatory and adaptive process of aligning internal resources with external challenges and opportunities, highlighting its importance as it embodies the ability to anticipate and respond in a rapidly evolving business environment. To further diversify the importance of strategy, Volberda and Elfring (2001) emphasise the need to adapt strategies to different cultural and regulatory environments and must continuously be re-evaluated and adjusted. Thus the adaptability of strategy enables organisations to succeed in a constantly dynamic global environment.

2.2.1 Definition and Scope

The concept of strategy has evolved considerably over the decades, with layers of depth added by different scholars, reflecting the dynamics and complexity of the business environment. Porter (1996) initially defines strategy as a selection of a unique mix of activities that deliver a particular mix of values, thus securing a sustainable competitive advantage by consciously choosing not to undertake certain activities. Building on this, Porter and Lee (2015) expand the definition by emphasising strategic decisions that uniquely position an organisation to meet customer needs efficiently, relative to the costs incurred. Mintzberg (2011) adds a dynamic layer by viewing strategy as a pattern in a stream of decisions, underlining its adaptability and emergent nature in response to changing circumstances. Further synthesising these ideas, Grant (2018) views strategy as the setting and pursuit of fundamental long-term goals that include the necessary actions and resource allocations to achieve those goals. Freedman (2013) adds complexity to the understanding of strategy by viewing it as an intricate interplay of planned and

unplanned elements which are influenced by a range of historical, psychological, and theoretical factors. Johnson et al. (2009) capture the essence of strategy as “the alignment and scope of an organisation in the long-term to achieve advantage in a dynamic environment through the configuration of resources and competencies with the aim of meeting stakeholder expectations” (p. 22). Collectively, these perspectives present strategy as a multi-layered framework that is essential for distinctive positioning and long-term adaptability in a rapidly changing global landscape. In this paper, strategy is defined as a framework that enables companies to navigate the complexity of modern markets through deliberate, responsive, and occasionally emergent decisions and emphasises the relevance to initiatives such as the DPP. It involves the integration of responsive planning, resource alignment, and innovative responses to regulatory changes and environmental challenges to achieve long-term success and maintain adaptability. Each of the definitions contributes to this holistic understanding and demonstrates that strategy is an essential requirement for utilising opportunities and managing the impact of digital and sustainable change in an ever-changing global landscape. In order to understand the nuanced implication of strategy, it is vital to first explore the different types of strategy and how they vary.

2.2.2 Types of Strategy

Strategy is multidimensional and incorporates different levels of planning and execution at different levels of an organisation. Understanding the multi-layered dimensions of strategy is essential, especially as initiatives such as the DPP have an impact on different levels of corporate activity. Differentiating between these dimensions does not alone enrich the academic discourse, but is also crucial for companies that want to analyse the full extent of the DPP's impact. This differentiation enables a more nuanced understanding of strategies at different levels of the business organisation and the resulting impact on companies.

As described by Porter (1996) and further elaborated by Porter and Lee (2015), corporate strategy involves decisions that affect the overall direction of the organisation, such as choices about which industries to compete in and the overarching goals like providing high-value care. This level of strategy sets the fundamental objectives that guide the entire organisation. According to Porter (1996), business strategy focuses on how an organisation competes within a

particular industry or market. It may involve decisions about the scope of services offered, tailored to customer needs and organisational capabilities, thus directly impacting competitive positioning (Porter, 1996). This includes strategic decisions on product offerings and market positioning that are tailored to the needs of customers and utilise the company's strengths. Porter (1996) goes one step further to define functional strategy as focusing on the most effective ways to support the business strategy. This includes developing innovative ideas or achieving operational efficiencies that support the broader business strategy (Porter and Lee, 2015). Functional strategies ensure that each department's activities align with and support the broader business and corporate strategies, enabling effective execution. Grant (2018) emphasises the importance for aligning strategic levels, ranging from corporate to functional, to ensure coherence and synergy throughout the organisation. This holistic approach underlines the dynamic essence of strategy, highlighting the importance of flexible responses to both external and internal shifts to sustain competitive growth. These strategic levels are intertwined to ensure that companies are able to adapt to the ever-changing business landscape.

2.2.3 Stakeholder Theory

Stakeholder Theory, developed by R. Edward Freeman in the 1980s, changed the way organisations conceptualise their responsibilities by extending them beyond shareholders to a wider range of stakeholders such as employees, customers, suppliers, and the community. This theory states that companies should consider all those who are affected or impacted by an organisation's objectives (Parmar et al., 2010; Friedman and Miles, 2002). The Stakeholder Theory therefore advocates for a strategy that incorporates ethical considerations and is in line with wider societal values (Parmar et al., 2010). The practical implications of Stakeholder Theory in strategic management are complex. Parmar et al. (2010) suggest that by using stakeholder relationships, organisations can improve their strategic decision-making processes to ensure that their business objectives are at the same time profit-driven but also ethically oriented and sustainable. In addition, Bidet al. (2010) highlight the importance of managing stakeholder relationships on an ethical basis to improve the integrity and trustworthiness of the organisation.

Friedman and Miles (2002) explore new dimensions of Stakeholder Theory by highlighting how stakeholder considerations can be closely intertwined with strategy conceptualisation. Their insights contribute to improving corporate management and innovating business models, which ultimately supports the creation of shared value. These improvements are particularly in line with initiatives such as the DPP, which promotes sustainability by incorporating environmental considerations into strategy formulation. This approach considers economic success, while taking the integration of societal needs into consideration, which is critical for long-term sustainability (Friedman and Miles, 2002). Argandoña (2011) expands on their idea by arguing for a broader concept of value creation that goes beyond economic metrics to include ethical and social values. This broader view encourages companies to consider the interests of all stakeholders in their strategic planning and decision-making processes and to promote a holistic approach. Donaldson and Preston (1995) describe the threefold nature of Stakeholder Theory - descriptive, instrumental, and normative. Each aspect offers unique insights into the implementation of Stakeholder Theory within strategic frameworks. The descriptive aspect provides insights into the functioning of organisations and the perception of stakeholder interests (Donaldson and Preston, 1995). The instrumental aspects link stakeholder management to traditional business objectives such as profitability and growth while the normative approach guides organisations in making ethical decisions (Donaldson and Preston, 1995). By simultaneously considering economic profitability, sustainability, and social responsibility, this framework ensures that corporate strategies are holistically aligned to make a positive contribution to society. This integration is critical as it helps companies navigate complex ethical landscapes, improve their contribution to society and maintain profitability, ultimately supporting sustainable success in an increasingly conscientious business environment.

2.3 Synthesis

Sustainability has transformed from a mere ethical consideration to a strategic imperative that emphasises the viability and competitiveness of companies globally. Companies are recognising the need to embed sustainability practices at every level of strategy, ranging from corporate to business and functional strategy. This change is being driven by both internal ambition and the rising expectations of consumers, investors, and regulatory bodies. Companies such as Patagonia

and Tentree have aligned their entire business model around sustainability, proving that this approach can form the core of a successful and resilient business strategy (The Good Trade, 2024). Furthermore, academic research emphasises the increasing intersection between strategy and sustainability and highlights the growing importance and need for a multidisciplinary approach, as Galpin et al. (2015) outline. This approach promotes a culture of sustainability that permeates all levels of the organisation and ensures that strategic initiatives are aligned with the wider commitment to sustainability, increasing the overall impact and value proposition of the organisation.

Integration of findings

The integration of CSR and Stakeholder Theory offers a comprehensive perspective on how contemporary businesses should conduct themselves within the broader environment. This synthesis emphasises their shared goal: sustainable business practices that incorporate ethical considerations and societal values, as outlined by Parmar et al. (2010). These frameworks advocate for a holistic view of business practices by considering more than the interests of shareholders and the company itself, additionally stakeholders such as employees, customers, and the environmental consequences of their business practices. Consequently, integrating social well-being and environmental responsibility alongside economic viability is central to a successful sustainability-focussed strategy (Placet et al., 2005). Baumgartner (2014) supports this view, arguing that sustainability and CSR must be integral to corporate strategy to promote innovation, stakeholder engagement, and operational efficiency, which are critical to economic survival and long-term success.

A comparison of the two frameworks reveals that CSR often focuses on a company's ethical obligations and social commitment, while Stakeholder Theory provides a broader framework that allows these obligations to be aligned with the interests of the various stakeholders, thus providing a more comprehensive approach to corporate strategy. The DPP advocates for practices that align with theoretical suggestions, while also providing a practical approach for integrating CSR and Stakeholder Theory. By providing detailed information about a product's lifecycle, from raw material extraction to disposal, the DPP can be used as a tool that facilitates

transparency and accountability. Thus, the DPP aligns with CSR's emphasis on ethical responsibilities while ensuring that these are integrated in corporate strategies, taking an organisation's stakeholders into account.

Theoretical implications

From a theoretical perspective, the presented findings challenge and extend existing business paradigms by emphasising the need for an integrated approach to business strategy that takes into account both economic and non-economic factors. The introduction of the Digital Product Passport is an example of how sustainability can be embedded into companies' operational strategies to balance regulatory and consumer demands. This shift towards sustainability-oriented business models challenges the traditional metrics of business success and proposes a broader assessment framework that includes ethical, social, and environmental dimensions, aligning with Argandoña's (2011) advocacy for a more extensive view of value creation. The integration of CSR and Stakeholder Theory through initiatives such as the DPP therefore improves the theoretical understanding of strategic management and enhances the motivation for sustainable practices. Consequently, companies are able to operationalise these theories in a practical manner. The combination of theoretical and practical elements facilitates the creation of shared value, where a company's success is measured by its financial performance, and by its positive impact on societal and environmental dimensions.

Practical implication

As companies continue to cope with the complex interplay of market demands, regulatory pressures, and societal expectations, the Digital Product Passport could serve as an important tool to redefine industry standards and promote a shift towards more sustainable, ethical and transparent business practices. This perspective directly aligns with the research question of how companies view sustainability initiatives like the DPP. Are they seen as a real opportunity to make more conscious decisions or merely as a bureaucratic constraint? In addition, the consideration of the role of the DPP sheds light on the broader question of how companies balance their strategies, such as better compliance and market positioning, against potential downsides, including increasing operational costs and complexity. The intertwining of strategic

corporate objectives and sustainability engagement highlights the multi-layered impact of the DPP on modern business practices and provides a nuanced understanding of its integration into corporate and business strategy.

3. Methodology

This chapter outlines the qualitative research methodology used in this study and details the approaches and techniques used to collect and analyse data. The chapter provides a detailed framework explaining how the research questions were approached, detailing the reasoning behind the selection of qualitative methods and illustrating how these methods provide an in-depth understanding of the topic.

3.1 Research Approach

When selecting the research approach for this study, a qualitative approach was favoured over a quantitative one due to its alignment with the overall purpose of the study. Grosseohme (2014) and Creswell (2014) argue that qualitative research is fundamentally exploratory and crucial to understanding the nuanced experiences of individuals in their natural contexts. This approach is particularly appropriate given the exploratory nature of the research questions in this paper, which examines how organisations perceive and integrate sustainability initiatives such as the Digital Product Passport (Patton, 2002; Creswell, 2014). Paci et al. (2009) and Marshall and Rossman (2014) highlight the suitability of qualitative methods for this study, emphasising that this approach enables a deeper understanding of people's beliefs, experiences, attitudes, and behaviours through methods that generate rich, non-numerical data. This is crucial to broaden the context of the research, which focuses on organisational strategy and changes in operations.

The choice to conduct a multiple case study was motivated by the need for comparability and to gain insights from different companies, ultimately aiming to draw conclusions in several industries and enhance the depth of the analysis (Yin, 2017; Miles and Huberman, 1994; Gerring 2006). Furthermore, case studies have been proven to be particularly valuable in fields with practical orientation, such as management and the related areas of managing strategy and sustainability in a corporate setting (Starman, 2013; Yin, 2017). Secondly, the depth and contextual richness offered by case studies are unparalleled when it comes to exploring complex phenomena such as the implementation and perception of sustainability measures in a specific organisational setting (Yin, 2017; Starman, 2013). This approach is particularly well suited to an in-depth exploration of the differentiated research questions on the DPP, as it allows for a

detailed examination of the operational and strategic integration of sustainability initiatives in the real context of the organisations studied.

3.2 Research Design

Primary data was collected through semi-structured interviews, a method highlighted by DiCicco-Bloom and Crabtree (2006) for its ability to investigate personal experiences and perspectives, providing rich, nuanced data essential for understanding complex social phenomena. This flexibility is also highlighted by Ambert et al. (1995), who emphasise that such interviews allow researchers to delve deeper into emerging areas of interest, thereby enabling a thorough understanding of the subject. Grossoehme (2014) adds that semi-structured interviews provide a favourable environment for participants to freely express their stories and capture authentic voices and experiences that may be overlooked in structured methods. These interviews were designed to provide a deep understanding of participants' experiences, views and to provide rich, contextual data that revealed the subtle nuances and complexities of how organisations engage with sustainability initiatives. This method resonates with the interpretive nature of qualitative research described by Morgan and Smircich (1980), which aims to understand the complex realities from the perspective of the participants themselves, challenging initial assumptions and potentially expanding the theoretical framework of the study. The chosen interview format allowed for follow-up questions to be asked, enabling participants to expand or clarify their responses, ensuring that the researcher could collect a variety of data types (Saunders et al., 2012). This was particularly relevant as the study aimed to qualitatively explore the underlying “why’s” and “how’s” of integrating sustainability initiatives into business strategies. This is consistent with the interpretivist approach that aims to understand the meanings that interviewees attribute to their experiences and strategies (Saunders et al., 2012).

By interviewing employees with different positions within each company, the study was designed to gain a holistic understanding that captured the different perspectives within each organisation and gain nuanced insights from both management and operations. This variety was vital to uncovering the nuances of how sustainability initiatives are perceived and embedded into the structure of corporate strategies (Hennik et al., 2020).

3.3 Identification of Case Studies

When studying the impact of the Digital Product Passport on companies, the sampling and selection process for manufacturing firms was carefully considered to ensure robust and insightful data collection. The study was conducted at two different companies with Swedish and German origin which helped broaden the scope of the research to a larger geographical area while still keeping manageability. Furthermore, the companies were selected on the basis of their direct exposure to the regulations and the changes introduced by the DPP, thereby ensuring the relevance of the organisations. A key consideration in the selection of these case studies was their extensive experience in managing larger product portfolios. This was particularly important because the DPP mandates the inclusion of a QR-code on all products sold in the EU. Companies with extensive product portfolios offered valuable insights into the operational and strategic challenges of implementing such extensive changes across multiple product-lines. Their experiences provided a broader perspective that can be generalised to other companies facing similar regulatory requirements.

3.3.1 Case Selection

The decision to conduct two case studies in two companies operating in entirely different industries was motivated by the desire to broaden the scope of the research and draw conclusions that are applicable across various industries. Additionally, analysing one industry characterised by rapid consumer habits and quick decision-making in contrast to an industry where customer decisions are more deliberate, facilitated for an interesting comparison. Both companies and industries will be thoroughly described in the following chapter 4. *Empirical Data*.

3.3.2 Sampling Method

The sampling method in qualitative research is an essential step as it determines the richness and depth of the data gathered (Saunders et al., 2012). This method involves purposive sampling with the intention of selecting participants who can provide extensive and detailed insights regarding the research questions (Saunders et al., 2012; Grossoehme, 2014). The selection of the participants for the interviews was intended to cover a spectrum of perspectives, ranging from product development to strategic planning, to obtain a diverse picture. Furthermore, employees

interacting with different stakeholders and involved in different aspects of the company's operations were selected, which were in line with the study's aim to explore stakeholder engagement and the multidimensional impact of DPP. The sampling strategy, combining purposive and snowballing techniques with a targeted selection of case study topics, was intended to provide insights into the practical implementation and broader impact of the DPP within the Swedish and German manufacturing sector (Saunders et al., 2012; Grosseohme, 2014). The purposive sampling and snowballing methods recommended by Saunders et al. (2012) enabled a purposive approach to selecting participants who were likely to provide the most relevant information. This non-probabilistic sampling strategy is supported by Grosseohme's (2014) and DiCicco-Bloom and Crabtree (2006) approach of purposive sampling in qualitative research, which emphasises the inclusion of participants who can provide meaningful insights and relevant data. The companies selected for the case study were contacted through existing connections, which facilitated access and collaboration. These connections were deemed invaluable as it provided contact with key managers in the companies, allowing for more access to detailed insights required for the study.

3.4 Interview Process

To achieve a comprehensive understanding of the intended implementation and goal of the DPP, the researchers firstly conducted two background interviews with individuals from Swedish and German non-profit organisations involved with the implementation of the DPP. For the case studies, the researchers selectively interviewed individuals possessing in-depth knowledge of their organisation, including insights into potential operational changes and their perceptions of the benefits and drawbacks associated with the DPP's implementation. Over the span of March to May 2024 three employees per company were interviewed in order to obtain an exhaustive picture of the organisation. In addition, one follow-up interview per company was conducted for clarification purposes.

3.4.1 Conducting Interviews

Before each interview, a consent form (see Appendix 2) was sent out and signed by each participant to ensure that they understood the scope of the research and how the information they

provided would be utilised. For anonymisation purposes, neither the company nor the interviewees are called by name which enables transparency by the participant. Therefore, all participants are hereinafter referred to as Interview 1-10 and Managers 1-3, Company A, and Managers 4-6, Company B, presented in *Table 1*. This approach minimised the possibility of tracing statements back to specific individuals. After the initial contact with the managers to determine their willingness to participate in the interviews, appointments were arranged immediately. All interviews were conducted online or by phone call to ensure a convenient and efficient process for both the researchers and the interviewees. The interviews conducted ranged between 30 and 45 minutes due to its semi-structured nature and are visualised in *Table 1*.

Table 1 - List of interviewees

#	Interviewees	Duration (min)
1	Company A - Manager 1	45
2	Company A - Manager 2	40
3	Company A - Manager 3	45
4	Company B - Manager 4	40
5	Company B - Manager 5	30
6	Company B - Manager 6	40
7	Follow up with Company A - Manager 1	20
8	Follow up with Company B - Manager 4	20
9	Background interview	45
10	Background interview	30

After the interviews had been conducted, the AI tool Riverside (Riverside, n.d.) was used to transcribe the recorded audio file. For the translation of the transcript from German and Swedish into English, DeepL (Deepl, n.d.) was used to ensure accuracy and clarity. Following this, the

manuscript underwent fine tuning to remove unnecessary pauses and redundant words, allowing for more concise and articulate expression of the participants' ideas.

3.5 Theoretical Data Analysis

The theoretical framework of this research is grounded on the concepts of CSR and Stakeholder Theory and was chosen as it provides a lens for understanding how companies will integrate sustainability initiatives like the DPP while responding to the needs and expectations of various stakeholders. The concept of CSR is utilised as a supporting framework to contextualise the insights gained from the interviews. By placing the findings within the established CSR principles, the motivations as well as the strategic adaptations of companies in response to the DPP can be better understood. This theoretical context enables this study to answer the research questions by providing a perspective through which the integration of sustainability initiatives can be analysed. Furthermore, CSR helps to further understand how companies perceive the DPP and provides a broader perspective on the impact of the DPP on business strategies and operations.

The application of Stakeholder Theory was central to studying companies' strategic responses to the DPP as it provided a solid foundation for considering the countless perceptions and influences exerted by various stakeholders, including regulators, customers, suppliers, and employees, on the adoption and integration of sustainability practices. Furthermore, Stakeholder Theory emphasised the need to reconcile the often conflicting demands of these stakeholders, thus providing an ideal basis for examining how companies integrate social and environmental responsibility into their core strategies. Additionally, Stakeholder Theory facilitated an in-depth analysis of how organisations can adapt their strategies and operations in response to external pressures and opportunities. It allowed for a nuanced examination of the strategic adjustments implemented and highlighted both the benefits and challenges perceived by different stakeholder groups.

This bi-dimensional analytical approach was crucial for a comprehensive assessment of sustainability initiatives that takes the economic, social, and environmental dimensions into

account. This theoretical application provided the basis for a robust empirical analysis. Thus, Stakeholder Theory and CSR enriched the empirical study, and ensured that all relevant aspects of sustainability were extensively addressed in the study, strengthening the theoretical foundation of the research.

3.6 Quality of Data

While researchers vary in their perspectives on the significance of validity and reliability in qualitative research, it is important to raise the concerns they impose (Bell et al., 2022). Rather than adhering to traditional notions of validity and reliability, Guba and Lincoln (1994) and Bell et al. (2022) propose assessing the studies' trustworthiness and authenticity as an alternative way when conducting qualitative research.

3.6.1 Trustworthiness

The concept of trustworthiness is compromised by the Four Dimensions Criteria including credibility, transferability, dependability, and confirmability (Bell et al., 2022; Baumgarten, 2012). To maintain the credibility of this study, a systematic approach to gather information was employed (Baumgarten, 2012). Drawing from an extensive literature review, the fundamental concepts of sustainability and strategy were identified. These concepts provided the framework for designing interview questions, which were developed with careful consideration to ensure that relevant information from each company was gathered. To ensure alignment with the transferability of the study, a thorough description of the two case studies was conducted, allowing for a thorough understanding of the social context surrounding the interviews. This assured that others were well-informed about the potential transferability of the findings to contexts beyond those studied in this research. The third dimension outlines dependability, which highlights the importance of maintaining detailed records of every phase conducted in the research process (Bryman et al., 2021). In order for adequate interpretation of the data collected, transcriptions of each interview were conducted. This resulted in a comprehensive amount of data, which was utilised when identifying the findings of the research, which made its realness crucial. Lastly, recognising the significance of confirmability involves acknowledging the potential subjectivity inherent in the researchers' perspectives, as noted by Bryman et al. (2021), which may be

impossible to entirely eliminate. However, by incorporating the concept of triangulation and continuously engaging in peer-review mechanisms, the degree of subjectivity was minimised (Bryman et al., 2021).

3.6.2 Authenticity

The second criteria for qualitative studies is presented by the level of authenticity demonstrated, which encompasses the political influence of the study (Bell et al., 2022; Baumgarten, 2012). The five dimensions of authenticity involve fairness, ontological, educative, catalytic, and tactical authenticity (Bell et al., 2022; Baumgarten, 2012). While all five dimensions are integral to qualitative methodology, tactical authenticity emerged as the primary focus of this study, serving its most significant purpose (Bryman et al., 2021; Bell et al., 2022). Undertaking a study on sustainability and the circular economy inherently seeks to inspire future engagement and prompt actionable steps toward a more sustainable future, aligning with the overall purpose of tactical authenticity.

3.7 Data Analysis

In order to analyse the collected data from interviews, this study adopted the concept of the Gioia Methodology system and an abductive approach (Bell et al., 2022; Magnani and Gioia, 2023). This approach highlights a systematic way of data analysis (Magnani and Gioia, 2023). Following transcription an open coding process was applied in order to reduce the data and make it easier to analyse and interpret. Firstly, part of the text was tagged with codes in order to identify initial themes and patterns. Afterwards the codes were grouped into categories and used to develop broader dimensions that have emerged from the data, which are shown in *Table 2*. The significance of each data point was assessed based on its frequency and its potential contribution to answering the objective of this study. Taking an abductive approach inspired by Magnani and Goia (2023), this study aimed to extend already existing concepts and theories of sustainability and strategy to lastly generate new findings to add to the research field.

Furthermore, a comparative analysis between the two companies also enriched the research. By observing how sustainability initiatives were adapted and implemented differently in various

organisational cultures, sizes, and sectors, improved the ability to draw generalisable conclusions and deepen the understanding of the impact of the DPP. Combining the empirical findings with the theoretical framework enabled a comprehensive understanding of how sustainability initiatives are perceived and implemented in the companies studied. This approach allowed for validation through the collection of data from multiple sources, such as interviews and comparing them against existing theoretical insights. This did more than simply add richness to the data, as it also significantly increased the trustworthiness and authenticity of the findings, ensuring that the conclusions were well supported and reflected in-depth research.

3.8 Ethics and Limitations in the Methodology

To uphold transparency, the authors adapted a reflective approach to the study, aiming to mitigate potential biases and address ethical concerns. Furthermore, the limitations of the study are discussed to enhance understanding of the conducted study and its constraints.

3.8.1 Ethical Considerations

To effectively address the ethical concerns inherent in qualitative research such as causing harm to participants due to insufficient informed consent, breaches of privacy, or the usage of misleading practices, it is crucial to be aware of potential risks and biases (Bell et al., 2022). To prevent these issues, the concerns were adequately addressed prior to conducting the interviews.

Causing harm to participants could involve placing them in a worse situation than before participating in the study, for instance, by risking their relationship with their employer if they were to disclose information not favourable to the organisation. Given that one of the key objectives of this study was to determine whether sustainability initiatives are perceived as opportunities for more sustainable practices or merely bureaucratic requirements, disclosing information that portrays a negative aspect could be harmful to the employee. Therefore, anonymisation for the companies as well as all participants was ensured to prevent specific information from being attributed to an individual employee. This decision also ensured that the information provided was more accurate, enabling participants to be transparent. Furthermore, a consent form was sent out prior to the interviews, ensuring that each participant comprehended

the purpose of the study and how the information they provided would be utilised in the study, empowering them to make an informed decision to participate or not. Respecting the right to privacy was upheld by focusing on the purpose of the study, rather than delving into personal information about the participant. Additionally, participants were assured that if any question felt uncomfortable to answer, they had the option not to provide a response. Lastly, deception was prevented by recording and transcribing all interviews, rather than relying on note taking which can influence biases. According to Alvehus (2019), recording interviews as opposed to relying on the interviewers taking notes can enhance truthfulness and encourage a greater commitment to the actual interview situation. To mitigate the risk of anonymisation being broken due to recordings and transcriptions, all data not deemed valuable for the research was deleted after use.

3.8.2 Limitations in Methodology

When conducting qualitative research, researchers may encounter limitations beyond their control. One such limitation relates to the time constraint of the research project which consequently restricted the amount of interviews that could be conducted. To mitigate the risk, the research was structured to include two case studies, thereby broadening the scope to include a diverse range of participants in terms of age, gender, seniority, and positions within the two companies. Language presents another limitation arising from the conducted interviews. Given that the two case studies were conducted in companies of Swedish and German origin, where employees predominantly spoke Swedish and German as their native languages, it was decided to conduct the interviews in these languages to maintain the authenticity of the information gathered. However, the process of transcribing and translating the interviews from its original language to English increased the potential for misunderstandings and inaccuracies in expression, which potentially impacted the results of the study. Nonetheless, prioritising the interviewees' ability to freely express themselves in their native language was considered important by the researchers, despite the associated challenges with translation and transcription.

Lastly, the decision to conduct semi-structured interviews introduced the risk of an uneven amount of time that the interviews were held, as follow-up questions varied depending on the individual participants and their ability to provide information deemed as valuable. Moreover,

identical follow-up questions were not asked consistently, as they were tailored to each interviewee and adapted based on the context. Consequently, achieving an even amount of information from participants in similar positions has been challenging, potentially impacting the identified differences from the two case studies. Therefore, it is crucial to acknowledge the potential impacts of semi-structured interviews and consider the potential benefits of conducting structured interviews.

4. Empirical Data

This chapter first outlines and provides background information on the two companies in which the case studies were conducted in order to provide key data on the contextual environment. Subsequently, the findings of the interviews are systematically analysed using six self-developed dimensions as shown in *Figure 2*. The individual dimensions have been specifically identified based on the coding process presented in chapter 3.7 *Data Analysis*, their alignment with CSR, Stakeholder Theory, and reflect specific topics addressed in the research questions, thus facilitating a comprehensive and informed discussion.

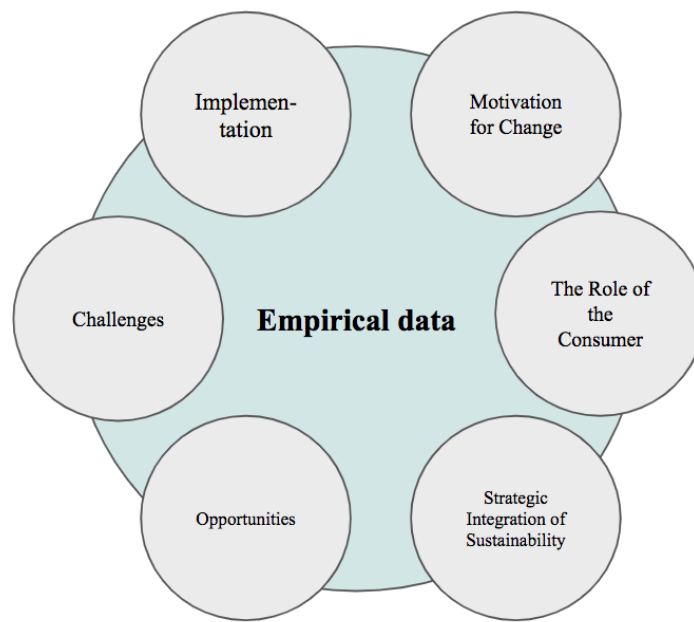


Figure 2 - Dimensions in Empirical Data (own visualisation)

The Motivation for Change dimension explores the factors influencing the implementation of the DPP by each company, mirroring CSR's focus on social and ethical responsibility and Stakeholder Theory's emphasis on balancing stakeholder interests. The Role of the Consumer dimension explores the impact of consumer expectations and demand, consistent with Stakeholder Theory's recognition of the consumer as a key stakeholder. The Strategic Integration of Sustainability dimension addresses how companies integrate the DPP into their broader sustainability strategies, reflecting the CSR principle of integrating social and environmental

considerations into business operations. The Opportunities and Challenges dimensions evaluate the perceived benefits and obstacles that each company faces in implementing the DPP, thereby providing insights into how these initiatives align with stakeholder expectations. Lastly, the Implementation dimension focuses on the practical steps taken to adopt the DPP and reflects both frameworks' emphasis on transparency, accountability, and proactive engagement with stakeholders. Presenting the data within the dimensions allows for an extensive and organised presentation of the empirical data. The results obtained from the interviews are then presented in *Table 2* and discussed in the following chapter.

4.1 Introduction of Companies

The first case study was conducted in a smaller Swedish company part of a larger corporate group, specialising as a chemical company with focus on researching alternatives to plastic with a primary distinction on the paint industry. They specialise in delivering high-quality paint solutions for consumers and professional painters in the home construction industry. Furthermore, they place significant emphasis on sustainable practices throughout the entire production process, striving to minimise their environmental footprint (Interview #1). Company A's commitment to sustainability extends beyond its products, as the company actively engages in Research and Development (R&D) to explore new innovative ways of improving energy efficiency and reducing carbon emissions, advocating for a green chemistry process (Interview #1). Their product offerings range from cans of paint to various paint supplies. Operating as a paint manufacturer calls for strong regulatory compliances since it's an industry with a lot of potential health and environmental hazards associated with the products. Therefore, ensuring product safety where adhering to regulations is considered the norm, and implementing proper waste management practices are crucial for paint manufacturers to mitigate these potential risks (Interview #1).

The interviews conducted at Company A delved into key managerial competencies where each manager's role entailed a variety of capabilities. Due to the smaller scale of the company, managers often had broader roles and cross-departmental insights. The knowledge spread from actively managing the company through strategic management, finance, and legal aspects to

HR-inquiries, as well as a broader focus on marketing development and sales. As a result, a thorough understanding of the organisation's scope was gained, allowing for valuable insights into its business practices and the implications of the DPP.

The second case study was conducted in Company B, which is a medium-sized company based in Germany that specialises in the development and distribution of personal care products in the fast-moving consumer goods industry (Interview #4; Interview 5). Since its foundation, the company has grown from two established personal care brands into a multi-brand portfolio company and has continuously grown, which has significantly expanded the product portfolio (Interview #4; Interview 10). With a strong focus on European markets such as Germany, Austria and, increasingly, other countries such as the UK, Sweden, and Poland, the company has built up a strong presence in brick-and-mortar retail. Company B operates in the highly competitive FMCG industry and faces strong market dynamics where innovation, brand loyalty, and operational efficiency are critical to staying ahead (Malhotra, 2014; Webster et al., 2006). The FMCG industry is known for its tight profit margins and the rapid pace at which products must be brought to market, making agility and responsive business practices essential elements of success (Malhorta, 2014). Sustainability has, at the same time, become a key focus as consumers increasingly demand products that are effective, environmentally friendly and ethically produced (Interview #4; Interview 10).

The interviews with key managers in Company B provided valuable insights into the essential role they play in ensuring the company's success in various areas. The insights collected came from participants with a wide range of responsibilities. These included developing new products, focusing on every detail of product and packaging design to overseeing all sales-related activities and shaping strategic direction of the company. Others monitored product ingredient and packaging compliance, insured the company against potential legal issues, and ensured that all products are safe and consumer-friendly. Collectively, these managers play an important role in managing the complexities of product development, marketing, distribution, and regulatory compliance - each uniquely connected to the product and contributing to the organisation.

4.2 Empirical Findings

The subsequent section will initially present the findings from each respective company. These findings are derived from the insights obtained through the semi-structured interviews and coding process outlined in the methodology chapter. Subsequently, *Table 2* aims to present the main similarities and differences that could be identified from the interviews conducted at Company A and Company B.

4.2.1 Company A

To gain a comprehensive understanding of the implications of the DPP on Company A's business practices, interviews were conducted with key managers. According to these managers, Company A is recognised as a leader in environmentally friendly business practices within their industry (Interview #1; Interview #2; Interview #3). Generally, the DPP was perceived as a positive initiative contributing to an increased amount of transparency for their customers which aligns with their purpose of employing a sustainable supply chain in their operational practices (Interview #1; Interview #2; Interview #3). Since Company A already has a longstanding commitment to sustainable practices, the potential changes the DPP would entail, were not seen as hurdles but rather as an opportunity for consumers to gain a broader understanding of their sustainability efforts through increased transparency (Interview #1; Interview #2). However, the attitude and perception from the industry was considered to be negative, as bureaucratic compliance has historically not been appreciated by the industry (Interview #1). In order to mitigate the risk of resistance from the industry, a simplified implementation process of the DPP was proposed. This would reduce the need for external help such as consultancy firms, which could potentially save companies the use of additional resources (Interview #1; Interview #3). It was clearly expressed that making the DPP a natural part of a company's strategic decision-making requires proper knowledge sharing from authorities in charge of the implementation (Interview #1). The following section will delve deeper into the insights and findings gathered from the interviews conducted, with the aim of providing rich data to further discuss in Chapter 5.

Motivation for Change

It is evident that all managers at Company A were in agreement that the company has an intrinsic need to conduct environmentally friendly practices and to prioritise cutting-edge R&D in order to develop sustainable products within the industry (Interview #1; Interview #2; Interview #3). Consequently, they exceed the minimum requirements for regulatory compliance regarding sustainability and are committed to continuously enhancing their products environmental impact (Interview #1; Interview #3). “We know that how we conduct business is based on these conscious sustainable choices based on our beliefs” (Manager 1, Company A). Company A perceives the compliance that the DPP will bring as an opportunity to further reinforce its position in the market by requiring the rest of the industry to be as transparent as they already are. Company A is ultimately anticipating an increased demand for sustainable products within the paint industry with the implementation of the DPP (Interview #1; Interview #2; Interview #3).

Role of the Consumer

It was widely believed that the transparency introduced by the DPP across the industry will influence consumer behaviour and decision-making processes (Interview #1; Interview #2; Interview #3). Therefore, utilising the opportunity presented by the DPP was considered as important in order to be aligned with the change of consumer behaviour that will follow. Manager 1 from Company A expressed confidence that consumers would leverage the information provided by the DPP, including scanning product QR-codes, to make purchasing decisions based on environmental impact. However, Manager 2 from Company A expressed that the use of the DPP will depend on the product and Manager 3 from Company A identified usage to depend on the individual and their relationship to sustainability. For instance, quick decisions made in the supermarket may still depend more on visual cues rather than information about the product's environmental impact provided by the DPP (Interview #2).

“The customer is the biggest winner” (Manager 1, Company A), which exemplifies the consensus of the all managers from Company A that the customer stand to benefit the most from the implementation of the DPP (Interview #1; Interview #2; Interview #3). Accessible

information will empower customers to make informed decisions, facilitating easier and better choices aligned with environmental friendly practices which ultimately has the opportunity of changing the paint industry (Interview #1; Interview #3). However, it was also mentioned that the customers engagement with the DPP stand as a crucial factor in its successful implementation (Interview #1; Interview #2). Company A envisions a future where environmental conscious decisions are made daily, where price does not solely dictate the industry at large (Interview #2). Ultimately, if more companies within the industry made investments in R&D and sustainable products, price could decrease in the long-term (Interview #2), which could be a potential consequence of the DPP.

Strategic Integration of Sustainability

Given Company A's existing commitment to sustainable practices, including selecting raw materials with minimal environmental impact, the adjustments were not seen as significant since the company already aims to uphold complete transparency with its stakeholders (Interview #2). The implications of the DPP on Company A's long-term strategy were primarily identified as increased transparency towards the end consumer, ultimately contributing to the organisation's overall mission of providing a sustainable alternatives (Interview #1; Interview #2). Consequently, Manager 1 and Manager 2 from Company A believed that the increased transparency would align with their strategic decision to engage in environmentally friendly practices. Their adaptations in operational practices influenced by the DPP primarily centred around ensuring the information is easily comprehensible for their customers through design, visualisations, and expression, a responsibility identified to mainly fall on the marketing department (Interview #2). To gain a competitive edge over the rest of the industry, Company A has initiated the process of exploring a potential integration of QR-codes into their labels even before legally mandated (Interview #1; Interview #2), proactively preparing their customers by changing the user experience and ultimately, preparing for the future implementation of the DPP.

Opportunities

Given Company A's long-standing commitment to promoting and implementing environmentally friendly practices from the start, the introduction of the DPP was viewed as a positive step in providing transparency to consumers (Interview #3). “For a company like us who’s already very sustainable, it's about providing the consumer with easily accessible information.” (Manager 2, Company A). As a company known for its high-quality products derived from premium raw materials, the DPP was seen as a channel through which customers could gain insights into the distinctions in quality compared to competitors (Interview #3). Incorporating the DPP into Company A's business practices was discarded as a challenge, as this information was already integrated into their operations through previously conducted Life Cycle Assessments (LCA) which include mapping out and showcasing their carbon footprint, product impact, and origin of raw materials (Interview #2; Interview #3). The focus regarding the DPP was primarily on coordination of transferring the data obtained through LCA’s and converting it into more accessible and understandable information for their customers (Interview #2; Interview #3). From Company A's marketing perspective, which revolves around differentiation strategy and their strong commitment to sustainable practices, the DPP was perceived as highly advantageous. As stated by Manager 1 Company A: “We want to talk about the substances of our products. That is the whole point to why we exist. It also benefits us because we are by definition more expensive because of our raw materials”.

Challenges

The primary challenge identified by Company A was the allocation of additional resources, both in terms of time and financial means (Interview #1). “There are elements that you must have in order to be part of this market and be relevant from a consumer perspective. So it’s a big financial aspect for us” (Manager 1, Company A). As a smaller player in the paint industry, Company A found it financially challenging to seek external assistance, such as consultancy firms, if their internal competence is insufficient. Consequently the ease of implementation is dependent on the provided information by regulatory bodies about how the DPP should be designed in order to maximise accessibility for the consumer and the industry (Interview #1). Consequently, competence emerged as a another challenge in the implementation of the DPP,

primarily due to its relatively unexplored nature (Interview #1). Companies being required to allocate additional resources in terms of time and money to implement the DPP will likely show a degree of resistance (Interview #1; Interview #2).

Implementation

As Company A conduct LCA's they have already collected the essential data to be showcased in the DPP (Interview #2; Interview #3). The marketing and project management departments were identified as the responsible parties for outlining and conducting the implementation of the DPP (Interview #1; Interview #2; Interview #3). The principal implementation steps for Company A were summarised as follows: the introduction of a new packaging format incorporating a QR-code (Interview #1), the implementation of some sort of IT solution to present the data provided by the DPP (Interview #1), and the necessity to gather new information from manufacturers of raw materials (Interview #3). Since acquiring knowledge about the DPP, Company A has commenced exploring the potential for incorporating a QR-code in their packaging, leveraging the fact that few other companies in the industry are aware of the DPP. The implementation for a new IT solution was anticipated to be employed by responsible authorities, thereby providing a solution for companies to implement it in a similar manner (Interview #2). The process of gathering information from manufacturers of raw materials to be included in the DPP was considered an important but yet unknown step due to its unexplored nature. In general, Company A regarded the implementation of the DPP as consistent with their overall practice of being a company with a focus on sustainable practices. They believed that it would be advantageous for the company to adopt this approach, as it would provide customers with the opportunity to make more informed decisions, which they hoped would lead to a change in purchasing habits to more sustainable products (Interview #1, Interview #2).

4.2.2 Company B

To understand the impact of the DPP on Company B, interviews were conducted with key managers who suggested a proactive mindset towards compliance and sustainability. The DPP was considered critical to increasing consumer transparency and improving communication of their sustainability efforts (Interviews #4; Interview #5 ; Interview #6). Their strategy includes

the early identification of regulatory changes and adapting product development and marketing accordingly (Interview #5). Although the DPP is considered a challenge, the company recognises it as a strategic tool to improve and communicate sustainability efforts, although requiring significant operational changes.

Motivation for Change

The company's motivation for change in response to the DPP is primarily due to the critical role of regulatory compliance, specifically in relation to sustainability standards. All managers emphasised the importance of complying with regulatory requirements arising from past changes such as those for microplastics in cosmetics (Interviews #4; Interview #5; Interview #6). By engaging in early discussions at the EU level to identify problematic ingredients, Company B illustrates a proactive attitude towards ensuring compliance by anticipating and adapting to future regulations (Interview #4). Another example of this proactive strategy is the positioning of one of its brands as “natural personal care”, which mandates that all internal processes from product development to marketing must adhere to strict internal sustainability standards (Interview #5; Interview #6). Consequently, Company B goes beyond simply complying with standards and improves its sustainability efforts to align with consumer demands and societal trends (Interview #4). This continuous adaptive process illustrates the company's wider commitment to sustainability, which is crucial to maintaining market relevance and meeting legal requirements.

Role of the Consumer

In the eyes of Company B, the role of the consumers can't be underestimated in regards to the DPP as they are being the intended beneficiaries due to more transparency and accountability (Interview #5; Interview #6). Furthermore, they are the ones deciding if they are going to buy a product or not and Company B views themselves as a consumer-centric company and have understood the importance of focusing on the consumer demands (Interview #5). Accordingly, the DPP provides “faster and more comprehensive information directly at the point of sale” (Manager 4, Company B) for Company B and gives consumers detailed insights into the product's sustainability claims. In addition, the DPP plays an important role in improving

consumer education. By linking packaging to detailed online information via QR-codes, consumers can easily verify a product's environmental impact (Interview #4). This demystifies green claims and highlights product content transparency and also encourages consumers to engage more deeply with the brand (Interview #4; Interview #5). “When consumers see a QR-code on the packaging, they can scan it to learn more about the product's life-cycle, materials used, and certification of eco-friendly claims” (Manager 4, Company B), encouraging a more informed and engaged customer base.

Strategic integration of sustainability

Company B's business strategy includes a proactive approach to sustainability, driven by socio-political trends as well as stakeholder demands in order to stay ahead of regulatory changes - an example of strategic foresight (Interview #5; Interview #6). The focus on sustainability has become a strategic and operational factor for Company B, shaping the direction of the company (Interview #5). This shift is part of Company B's consumer-centric approach that emphasises transparency and consumer involvement, which is in line with increasing consumer demand for clarity about the environmental impact and sustainability of products (Interview 6). Furthermore, Company B's proactive strategy is demonstrated by the fact that the company is acting ahead of regulatory changes before they become mandatory - not only in regards to the DPP but also past regulatory changes such as the use of microplastic or certain ingredients (Interview #4; Interview #6). Their proactive stance, such as continuously identifying and replacing problematic ingredients at an early stage exemplifies the strategic approach to sustainability (Interview #6). All managers emphasised that the company is adapting to broader ESG frameworks, demonstrating the integration of sustainability into its business operations ahead of regulatory requirements. Although these adaptations are seen as beneficial in terms of potential market differentiation and improved sustainability performance (Interview #4; Interview #5), they also bring challenges related to operational complexity and the need for significant strategic change (Interview #5).

Opportunities

From a strategic perspective, the DPP is seen as a way to increase customer awareness and improve the communication at the point of sale (Interview #4, Interview #5). "The Product Passport gives consumers faster and more comprehensive information directly at the point of sale than in the past, which means that we can further improve our communication about the composition and effect of our products, which I see as a strategic advantage" (Company B Manager 5). Therefore, the company's approach includes using the DPP to improve consumer education and point-of-sale communication by demystifying product content and sustainability claims (Interview #4, Interview #5, Interview #6). By doing so, Company B utilises the DPP to standardise its sustainability communication with more transparent product information in the hopes of influencing consumer perception and expectations (Interview #4). However, the strategic opportunities lie in the areas of communication and also Company B's intention to utilise the DPP to improve product innovation and adjust operational processes with the aim of increasing sustainability practices within the company (Interview #5; Interview #6).

Challenges

From an operational perspective, the implementation of the DPP will bring significant changes. For example, to ensure that all advertising claims are verified and to make this supporting information available to consumers, new IT solutions will be required, such as QR-codes on packaging and supporting Web-applications (Interview #4, Interview #6). "We could resort to IT or marketing solutions such as QR-codes on packaging to provide consumers with the necessary information" (Manager 6, Company B) thereby illustrating the operational changes required to comply with the new regulations. In addition, the DPP mandates third-party certifications, which "will lead to longer lead times for our product development" (Interview #6). For example, product content must be registered and certified by an accredited institute before the product is launched, making the development process more complex (Interview #4; Interview #6). "We will need to update packaging because we currently have claims on them that may fall under the implemented Green Claims Regulation, which is part of the DPP." (Manager 4, Company B). This requires significant updates to product packaging and validation of advertising claims through third-party certification, reflecting a trend towards accountability in product labelling

and marketing (Interview #4, Interview #5 and Interview #6). “We realise that there will be a lot of changes to the DPP in terms of green claims that will have a significant impact on some of our brands (Manager 6, Company B). Therefore, Company B is faced with working extensively to update their product packaging and marketing messages to comply with the upcoming regulatory changes by the DPP (Interview #5; Interview #6). However, as Company B positions their products as sustainable the DPP facilitates their ambition on improving communication and transparency around product sustainability (Interview #4).

Implementation

The implementation process of the DPP within Company B requires extensive coordination between multiple departments, in order to ensure the company's commitment to compliance and sustainability. The process begins with understanding the exact regulatory requirements as they arise, which involves close monitoring of updates from industry associations (Interview #6; Interview #4) thereby ensuring that the company is well prepared to adapt once the regulations are finalised. Once all the details are known, the main responsibility for implementing the DPP lies primarily with the technical departments, especially R&D and Quality Management (Interview #6), as these departments must ensure that all products comply with the new regulations. Furthermore, marketing plays a crucial role as it has to adapt product design and communication strategies to the new standards in order to ensure that all claims are accurate and effectively communicated to the consumer (Interview #4; Interview #6). Another important operational step is the usage of QR-codes on packaging that lead to detailed product information provided either internally or by an external provider (Interview #6). This was also explained in Interview #5, where it was pointed out that the IT department may need to be involved in managing the digital connection to ensure seamless access to the information. In Interview #6, it was mentioned that the company already conducts rigorous testing to ensure compliance but due to the DPP the matter of making the information accessible to the consumers poses a challenge. Although the DPP will require significant coordination between departments and adjustment to department specific processes, Company B views their proactive approach as an advantage to ensure it stays ahead of regulatory changes and more importantly strengthens its commitment to sustainability.

4.3 Comparison of Company A and Company B

The following table summarises the key empirical findings from the two case studies described above and outlines the similarities and differences within each dimension. Within each dimension themes and patterns have been identified and are supported by quotes in their respective columns to verify the findings.

Table 2 - Similarities and Differences for identified dimensions

Dimensions	Similarities	Data from interviews → Similarities	Differences	Data from interviews → Differences
Motivation for Change			Intrinsic vs. proactive/compliance	<p>“It is a mandatory part of the business and thus a significant lever in communication and direction for consumers” - Manager 5, Company B</p> <p>“It was a group of painters who thought that there were not really good environmentally friendly paints that were less harmful to the environment.” Manager1, Company A</p>
Role of the Consumer	<p>Importance of the consumer</p> <p>Beneficiary</p>	<p>“The customer is the big winner.” - Manager 1, Company A</p> <p>“The DPP provides 'faster and more comprehensive information directly at the point of sale' and gives consumers detailed insights into the product's sustainability claims.” - Manager 5, Company B,</p>	<p>Engagement with the product</p> <p>Different usage of the DPP</p>	<p>“I believe that consumers will use the DPP as a tool for information” - Manager 1, Company A</p> <p>“From a consumer perspective, it will be great. That I am completely convinced about.” - Manager 3, Company A</p>
Strategic Integration of Sustainability	<p>Strategic integration of the DPP</p> <p>Consumer perception and engagement</p>	<p>“My hope is that the consumer will be aware of their choices” - Manager 1, Company A</p> <p>“The DPP equips consumers directly at the point of sale with faster and more comprehensive information than in the past,</p>	<p>Opportunity to do more in alignment with market trends vs. tool for communicating existing efforts</p>	<p>“It's about providing the consumer with an easier way of understanding the information we already have gathered”. - Manager 1, Company A</p> <p>“There may be others who do it differently and take advantage</p>

		leading us to further enhance our communication about the composition and effects of our products.” - Manager 5, Company B		of it now (...) and have a competitive advantage or a lead in time. But we are too small to position ourselves at the forefront of this movement” - Manager4, Company B
Opportunities	Differentiation through communication	<p>“As for me on the marketing side, I try to differentiate our brand among others and expressions we use in the colour industry.” - Manager 1, Company A</p> <p>“We communicate the essential differences that make us as a brand truly special compared to the competition” - Company B, Manager 6</p>	Visualisations vs. content	<p>“I think that plays a big role as well to make the process easier, filling out a template makes it look the same for everyone.” - Manager 1, Company A</p> <p>“Through our brand's nature-oriented positioning, the question arises whether we can continue to the same extent in the future or whether we might have to reconsider the product content and claims and perhaps even approach the brand positioning itself to accommodate the sustainability initiative” - Manager 4, Company B</p>
Challenges	<p>Allocation of resources/ coordination between departments</p> <p>Uncertainty of implementation</p> <p>Verification of data</p>	<p>“The biggest challenge really lies in the political design of the product passport and how it should be done” - Manager 1, Company A</p> <p>“We will wait to see what regulations come out (...) and implement these things promptly or at an adequate pace” - Manager 4, Company B</p>	<p>Verification of different data</p> <p>Product development</p> <p>Accessibility and clarity of data</p> <p>Implementation of IT-solution</p>	<p>“It requires significant updates to product packaging and validation of advertising claims through third-party certification.” – Manager 4, Company B</p> <p>“The information that will be in the product passport, we have that.” - Manager 1, Company A</p> <p>“We are very far ahead compared to many others.” - Manager 2, Company A</p> <p>“If they do what they usually do, you are demanded to do something but then it's up to yourself to sit and google and find out something, even find an expensive consultant who</p>

				takes a huge amount of financial resources.” - Manager 1, Company A
Implementation	<p>Third-party collaboration</p> <p>Visualisation</p> <p>Marketing involvement</p>	<p>“Maybe you need to hire one or more people to work with this.” Manager 1, Company A</p> <p>“There are going to be a number of consulting agencies who will specialise and want to be paid well.” Manager 1, Company A Interview #3</p> <p>“We might need to work with a third-party to ensure data compliance” - Manager 6, Company B</p>	<p>Complexity of operations</p> <p>Amount of involved departments</p> <p>Brand portfolio</p>	<p>“In terms of implementation, we (...) need to adjust product artwork and then change claims. This requires strategic brand work and communication (...), then it has to be implemented on the packaging. Afterwards artworks will be modified. They have to be submitted, approved legally, and then printed and incorporated into production. “ - Manager 4, Company B</p> <p>“The biggest challenge to implement the DPP is probably about changing, even though it's not really a big challenge.” - Company A Interview #4</p>

5. Discussion

This last chapter will offer an in-depth discussion of the insights gathered throughout the study with the aim of exploring the main insights. Following this, a final conclusion with the purpose of answering the research questions will be conducted. Finally, the chapter will end with a discussion about the study's limitations as well as suggestions for further research.

5.1 Analysis

In the following section, the data that was presented in Table 2 will be thoroughly discussed to gain in-depth insights into the company's perspective towards the DPP, its up and downside as well as the implementation of it. The analysis will be structured by examining each dimension presented in Table 2 and expanding on the information provided in Chapter 4.

5.1.1 Motivation for Change

Based on the results of this study, it is evident that companies have different motivations for adapting to the requirements of the DPP, which may be driven by the companies' commitment to sustainability practices. On the one hand, companies which are leading sustainable change in their industry, have already integrated CSR practises into their core business model and are committed to changing industry practices for the better show intrinsic motivation for adopting sustainability initiatives. An example of this is Company A and its sustainable business practices, underlined by its commitment to sustainable products and investment in research and development to improve its environmental footprint. In contrast, for other companies, the motivation for change stems from a proactive approach to compliance, in particular the early identification of regulatory changes, which is also in line with CSR principles, although to a different extent. These companies, such as Company B, respond to external pressure but still go beyond the minimum required as they provide early product transparency, gaining the trust of stakeholders such as consumers and regulators.

Due to the novelty of the DPP, the identified differences between genuine commitment and motivation towards sustainability, particularly in relation to regulatory compliance, raises questions about the authenticity of the efforts related to sustainability. Ultimately, the motivation

to change in order to meet the requirements of the DPP stems from the company's distinct approaches to sustainability and compliance. Company A and Company B illustrate how the variations in intrinsic motivation differentiate companies' approaches to implementing the DPP. The underlying differences may be due to market positioning, leadership, financial resources, or stakeholder expectations. As a result, companies will have different approaches to sustainability therefore industries will see a variety of responses to the DPP, ranging from innovation-driven strategies to more compliance-focused, reactive measures.

5.1.2 The Role of the Consumer

Both companies acknowledge the significant role of consumers in the success of the DPP. As consumer-oriented businesses, their integration of the DPP aligns with current market trends by considering all stakeholders' interests, including consumers. Recognising that consumers are the ultimate beneficiaries, both companies aim to provide detailed information about their products' sustainability and environmental impact. This empowers consumers to make informed decisions and meets the growing demand for ethically produced products. Consequently, companies with a consumer-centric approach, could leverage the DPP as an opportunity to showcase their CSR commitments, build consumer trust, and demonstrate their commitment to sustainability.

The level of consumer engagement with the DPP will vary between industries due to differences in their product offerings. For industries similar to those in which Company A operates, potential consumer tendencies to prioritise functionality and visual cues over detailed environmental information could lead to potentially passive engagement with the DPP. In contrast, Company B represents an industry with more active consumer involvement, where consumers potentially scrutinise ingredients and sustainability claims due to direct body application. This active engagement may prompt consumers to scan a QR-code at the point of sale to access detailed environmental data, indicating higher consumer involvement in the purchasing process. However, it could be argued that the FMCG industry is renowned for quick decision-making by consumers at the point of sale, potentially failing to benefit from the information provided by the DPP and falling victim to believing a product is sustainable solely due to its visual appearance. In contrast, industries similar to the one Company A operates in, may also involve slower

decision making, resulting in consumers taking additional time to use the DPP and learn more about the environmental impact of the product. Ultimately, the impact of the DPP on industries with different characteristics will depend on the extent to which it is used by consumers in their everyday purchasing decisions. If the consumers do not engage with the DPP and the provided information, the initiative's potential is diminished. The successful usage of the DPP is therefore dependent on companies complying with the regulations and on consumers actively seeking, engaging with, and valuing the information that is provided thereby making better informed decisions based on this information. Consequently, companies with sustainable operations may wish to raise awareness of the DPP as a means of differentiating themselves and creating public awareness, providing adequate education to encourage consumer engagement with the DPP.

5.1.3 Strategic Integration of Sustainability

Based on the theoretical framework and the empirical findings two different approaches to the integration of sustainability initiatives into the business strategy have surfaced. The strategic alignment of CSR and a proactive sustainability approach has emerged as one of those. The characteristics for this group of companies have an existing and proactive CSR approach and view sustainability initiatives as an extension of their existing business practices. Furthermore, their commitment to sustainability is already embedded into their business model. Additionally, the DPP aligns with those companies ethical and social practices which allows them to fulfil their CSR commitment. An example of this is Company A which uses their LCA's to measure their environmental impact and their usage of sustainable raw-ingredients illustrate their sustainable business practices. This can be exemplified by the implementation of QR-codes to make detailed product information accessible to the consumer as well as their usage of high-quality sustainable raw-materials which increases transparency and illustrates their environmental impact. Therefore, their business practices align with their CSR objective to focus on more factors than economic success. Companies who are motivated by compliance are able to utilise the DPP to gain an advantage in the market.

Although the approach is primarily compliance driven, it can also be understood as a commitment to CSR as going beyond legal requirements, as proactively adopting the DPP shows

commitment to transparency and exemplified the voluntary initiatives in order to benefit society, typical for CSR. An example of this is Company B, which anticipates regulatory changes of the DPP and prepares for those, thus highlighting their commitment to accountability.

Based on the two approaches the question arises why companies have different approaches to integrating sustainability initiatives and what factors play a role in determining the approach. One factor might be the extent to which such initiatives align with the existing business model and the complexity degree of the implementation. Additionally, the costs of adopting such measures might influence a company in choosing an approach. Stakeholder expectations might play an equally important factor, varying from market dynamics, consumer expectations, the regulatory landscape and internal stakeholders as company's employees and the internal culture can profoundly influence a company's approach to sustainability.

While CSR is essential for understanding the ethical and social responsibilities of companies in the academic discourse and corporate world, the findings of this paper suggest that it is potentially limited for understanding sustainability practices as it has insufficient granularity to differentiate between those that are proactive and compliance-driven. Such limitations become clear especially when companies adopt their practices “forced” rather than intrinsically motivated. Therefore it can be argued that the CSR concept needs to be more nuanced. The integration of elements of ESG criteria, renowned for their standardised and measurable indicators, as well as insights from Stakeholder Theory, could help to differentiate between the various drivers that influence corporate behaviour. The combination of these could reveal a more nuanced understanding of sustainability practices.

5.1.4 Opportunities

The DPP can be considered a differentiation tool for companies as it aims to offer transparency and understandable product information. By doing so, companies such as Company A and Company B hope to increase awareness of their CSR initiatives and build consumer trust. This, however, raises the question of the degree to which differentiation will be possible if all companies are required to comply with the DPP. While early adoption of the DPP may be seen as

an advantage, the differentiation from the DPP will be reduced after its wider implementation, as every company will be required to transparently disclose its information. The DPP seeks to create an equal playing field where companies have to be competitive based on their actual sustainability practices rather than exaggerating their practices, which might push the market towards higher standards of corporate responsibility. In addition, those companies which exceed the requirements and outperform the competition through means such as digital interfaces or engaging storytelling techniques while displaying their product information may gain an advantage. Moreover, once fully implemented, the DPP is likely to elevate consumers' awareness and interest in the product. This could in turn lead to better informed consumers who might develop preference for brands which adopt more sustainable practices, enabling companies to benefit from such practices. The increased transparency will also help consumers to make better informed choices, potentially leading to a higher demand for products that follow sustainable practices.

5.1.5 Challenges

The implementation of the DPP entails a number of challenges that go beyond the actual implementation, which initially requires the allocation of resources to manage the process. Based on the findings of this research, collaboration with third parties seems almost inevitable to comply with the DPP. This collaboration can be associated with higher costs and disruption of existing processes, potentially causing resistance in companies and industries.

In addition, companies have recognised the importance of effective coordination between different departments such as R&D, marketing, and IT to ensure successful implementation of the DPP. However, the novelty of the DPP regulation and the fact that it has not yet been transposed into national law makes it intangible for companies, which in turn creates further challenges as they need to develop flexible strategies that can be adapted to changing regulations. The adoption of the DPP for companies could also lead to industry-wide challenges as the newly created transparency exposes best practice, which could lead to other companies adopting higher standards of sustainability practice and encouraging copycat behaviour. Drawing from the empirical data and its inter-relation to the key theoretical concepts of this paper, a

correlation between a company's CSR efforts and the associated challenges emerges. Companies with more advanced CSR strategies may have a less complex integration process as their existing CSR mechanisms overlap with new sustainability initiatives thereby mitigating the complexity associated with the adoption of such. Conversely, companies with limited CSR efforts potentially face broader challenges, resulting in higher adaptation costs and business disruption. The probable correlation can be illustrated as companies with established and extensive CSR practices face fewer barriers to the DPP adaptation such as Company A.

5.1.6 Implementation

The implementation of the DPP is mandatory for all companies affected by it, although the specific process varies and depends on different factors such as the size of the company, the complexity of its product portfolio, and the amount of sustainability data collected. Whilst the main process of implementing the DPP appears to be similar across companies, the extent of change can be broader than the initial requirement for the DPP and could trigger wider operational and business model adjustments depending on the driving factors of corporate sustainability practices. Some companies with extensive brand portfolios, such as Company B, face more complex implementation processes as it requires coordination and resource allocation to manage the implementation accordingly. Other companies, such as Company A, which already have sustainability data and practices in place will face easier implementation. In contrast, companies that need to make broader changes to meet DPP requirements could face changes such as reformulating products, redesigning packaging, and deploying new communication strategies, leading to more complex implementation processes. Therefore, it can be concluded that companies that prepare and adapt to the regulations early might be at an advantage, as a proactive approach to the DPP allows for better preparation time, more fine-tuning, and avoids last-minute rushes as well as internal resistance due to lack of time. Nevertheless, once the DPP becomes mandatory, companies that use it as a mechanism to improve their CSR and ESG initiatives are still able to differentiate themselves, as the depth and authenticity of their sustainability practices will likely continue to matter to consumers and stakeholders.

5.2 Conclusion

This research paper aimed to determine whether sustainability initiatives such as the DPP were seen as opportunities or merely bureaucratic requirements and examined how companies adapted their strategies and operations, identifying the pros and cons of such adaptation. The literature review on sustainability, CSR, the DPP, and Stakeholder Theory supported these insights. Case studies from two different industries highlighted the DPP's complexity and company responses. The study explored companies' views on the DPP, strategy adaptations, stakeholder influence, and the impact on consumer behaviour. The discovered insights provide the basis for answering the research questions.

Are sustainability initiatives like the DPP regarded as opportunities to make more conscious decisions, or are they dismissed as mere bureaucratic requirements?

Based on the findings in this paper, it can be concluded that sustainability efforts such as Digital Product Passport are not seen as mere bureaucratic obstacles but real opportunities to make more conscious decisions. The DPP is being regarded as a strategic initiative to enhance the sustainability efforts of companies as it can be integrated into the existing business strategies to improve transparency, sustainability, and external communication. Additionally the DPP was perceived as a tool for differentiation of products and brands, which allows companies to leverage it in order to position their brand by offering transparency and understandable information. However, the nuanced differences between companies is dependent on their stance to sustainability and their intention to the DPP. For companies which already place a strong emphasis on sustainability, the DPP serves as a natural extension of their existing practices, reinforcing the market position they have already established. Conversely, companies can also view the DPP as an opportunity for innovation and adaptation to market trends. Despite facing different levels of complexity in operational and strategic adaptations, the benefits of its implementation were recognised, demonstrating the commitment to ethical practices and stakeholder engagement. One of the primary drivers for companies' motivation towards the DPP was identified in the potential consumer perception and engagement. Similarly companies emphasised the potential of educating consumers through the DPP, aiming to offer easily

accessible information to meet the increasing demand for transparency and sustainability. By empowering consumers with a tool for making more informed decisions, the DPP promotes the growing demand for corporate transparency and sustainable consumer practices.

While the empirical data showed that challenges such as resource allocation and uncertainty in implementation exist, the responsibility authorities will take in the upcoming years is seen as a key driver to mitigate resistance and advance the industries towards a more sustainable future. Consequently, sustainability initiatives like the DPP are regarded as opportunities to align with consumer expectations, enhance brand reputation, and ultimately contribute to positive industry transformation.

What strategic and operational adjustments do companies anticipate with the introduction of the DPP? What are the expected advantages and disadvantages of such adjustments?

Based on the results of the case studies and the theoretical framework, the research illustrated that companies with established transparency and sustainability practices require minimal strategic and operational adjustments and are able to focus on strengthening their current efforts. Such companies are capable of capitalising on their long-standing sustainability commitment to incorporate new initiatives seamlessly into their business operations. Comparatively, companies regarding sustainability initiatives as a strategic opportunity to amplify their efforts face significant challenges, such as introducing new technologies and engaging third-party services which increases the complexity of business operations and necessitating financial resources. These companies rely on sustainability initiatives to drive product innovation and meet changing market demands, demonstrating accountability and transparency to stakeholders.

Although the DPP may necessitate minor alterations to strategy, the operational changes required for complying with the DPP are considerably more complex as companies are confronted with significant operational changes, dependent on their approach to sustainability, the complexity of the business practices and brand portfolio. The extent of operational adjustments required to comply with new regulations varies depending on the company's approach to sustainability

initiatives, mainly influenced by their intrinsic or proactive and compliance-driven stance. As the compliance-driven approach might have fewer synergies between business practices and sustainable practices, the potential of an increased amount of operational adjustments arises to comply with new regulations. As more brands and products are affected by the introduction of the DPP, the operational impact on the company becomes more complex and extensive. Consequently, product development, product packaging, and marketing messages must comply with the new sustainability standards. The extensive cross-departmental coordination presents companies with challenges requiring an introduction of new IT solutions to digitise and visualise the information. Furthermore the sustainability efforts of the company towards the consumer need to be communicated, which requires the visual representation of the data to maximise the DPP's potential in educating the consumer and creating awareness. Despite the challenges, the DPP improves consumer engagement and transparency by making sustainability information more accessible.

While the strategic and operational changes require considerable effort from companies, there is perception of both opportunities and drawbacks in the implementation of the DPP. Beneficially, companies can increase consumer trust, loyalty, and credibility as their sustainability efforts become more transparent. Sustainability practices differentiate products and brands, enhancing reputation and aligning with consumer demand for ethical practices. Additionally, proactively implementing sustainability initiatives helps companies stay ahead of regulatory changes and global trends, ultimately decreasing legal risks that could lead to operational and financial damage.

In summary, the implementation of the DPP will come with significant drawbacks. The implementation will increase operational complexity, especially for companies with a reactive-compliance driven approach and those with diversified product portfolio, as it will require updates to packaging, marketing, and potentially new IT systems. To mitigate this, companies will have to allocate substantial resources such as time, money, and labour to ensure sustainability measures are implemented effectively. Furthermore, coordination between multiple departments is essential yet challenging, particularly for larger companies. In addition, the

perception of the bureaucratic nature of sustainability initiatives can cause resistance from both internal and external stakeholders, meaning that companies may face pushback and delays from employees and partners who might be hesitant to adapt to new regulatory requirements.

5.3 Contribution

The intention and nature of this research was not to maximise the theoretical contribution in regards to CSR and Stakeholder Theory but rather explore the implication of the DPP on the companies. However, in so doing, new insights into the complex interplay between the DPP, CSR, and Stakeholder Theory have also emerged which may offer valuable contributions to wider debate on corporate sustainability and stakeholder interaction.

The theoretical contribution of this paper is to extend the knowledge in the academic discourse concerning CSR and Stakeholder Theory in relation to sustainability initiatives, such as the DPP due to the novelty of it. By analysing two companies and their approaches to the execution of the DPP, two distinct patterns emerged, such as the alignment of CSR with a company's proactive sustainability efforts as well as a compliance-driven approach. The analysis of those approaches also shed light into the limited abilities of the CSR-concept in understanding the granularity which could differentiate between various drivers that influence corporate sustainability practices. Additionally, this study extended the knowledge on Stakeholder Theory by demonstrating how various stakeholders, mainly consumers and regulators influence and are influenced by sustainability practices. This can be exemplified by the intrinsic motivation or a reactive compliance driven motivation of companies in responding to regulatory changes and sustainability practices as well as to consumer and market demands. These findings highlight the interaction between stakeholder expectations and corporate actions and provide a differentiated perspective on how companies can reconcile these often conflicting demands.

More importantly, this research provides valuable empirical data on the practical implementation of the DPP in industries operating in similar settings as Company A and Company B. By studying the effects of both companies, this research provides detailed insights into how companies perceive and respond to regulatory changes to improve product transparency and

sustainability practices. By highlighting the practical challenges and opportunities associated with the DPP, these case studies contribute to the empirical data by showing how companies of different size, market position, and operational complexity deal with the expected requirements of the DPP. This contributes to an enriched understanding of the diverse responses by companies to sustainability requirements, ultimately providing valuable insights for designing and implementing the DPP to maximise the outcome.

From a practical perspective, this research provides applicable insights for businesses, policy makers, and sustainability advocates. For businesses, the findings illustrate the significance of a proactive approach to regulatory change, and exemplify the advantages of integrating sustainability into their strategy, including increased consumer engagement. Additionally, this paper outlines the urgent need for clear and specific guidelines and support mechanisms for policy makers to facilitate compliance and maximise the impact of the DPP. Lastly, for sustainability advocates, the study highlights the critical role of transparency and consumer education in promoting corporate responsibility as it provides supporting arguments that regulatory frameworks such as the DPP can be effective in improving both environmental practices and consumer trust.

5.4 Limitations

This research paper examines the impact of the DPP, navigating the complex landscapes resulting from the early stages of DPP conceptualization, regulatory integration and theoretical insights. This chapter discusses the limitations of this research, recognising that no study is without limitations.

Firstly, the transition of the DPP into national law is a major hurdle. As it is a European Union initiative, the DPP must be incorporated into the laws of the individual member states. This phase of legal transition complicates the immediate applicability and enforceability of the DPP, and additionally leads to uncertainty regarding the final legal requirements. As a result, companies are in a standby mode, preparing for change without specific guidance, making it difficult for them to assess the potential impact. Secondly, the details of the DPP requirements,

particularly in relation to supply chain transparency and data disclosure, are yet to be finalised. This leads to speculative assessments by companies based on currently available information, which may not match the actual requirements of the DPP once fully formulated and enforced. This gap in factual data makes it challenging to predict how companies will need to adjust their operational and strategic processes to comply with and benefit from the DPP. Furthermore, there is little in-depth empirical data. Ideally, findings from companies involved in DPP pilot projects would provide information on the practical effects. However, due to the novelty of the DPP and the early stages of these pilot projects, comprehensive data collection from those companies is limited. A few companies are just starting to think about the impact of the DPP and even fewer are in the active implementation phase. While some parallels can be drawn with previous, similar initiatives, these do not fully capture the unique aspects of the DPP. These historical comparisons provide context, but may not fully reflect the evolving technological and regulatory landscape in which the DPP operates. Therefore, there is a risk that assumptions are made based on these comparisons, which could lead to over- or underestimating the actual challenges and opportunities of the DPP. Furthermore, the scope of the study is limited to two case studies - one from Germany and one from Sweden. Therefore, the small sample size may not represent the full range of industry practices, thereby limiting the transferability of the results. Furthermore, the industry-specific findings might not be applicable to other industries. Differences in regulations, market dynamics, and consumer behaviour is something that needs to be acknowledged when applying the findings to other industries and countries.

5.5 Future Research

The primary challenge posed by the DPP lies in its implementation. Based on the findings of this research, it is advised that relevant authorities in each affected country provide proper information to stakeholders affected by the DPP. Therefore, it is suggested that further research focuses on developing implementation steps to streamline the integration of the DPP, thereby reducing the risk for resistance and backlashes from those affected. Additionally, as the DPP moves closer to full integration into national legislation, future research should concentrate on the practical implications and the necessary strategic adjustments for compliance. This research would benefit from detailed analysis of how companies are modifying their operational and

strategic processes to adapt to the requirements of the DPP, providing valuable insights into the direct impact on companies' decision-making and practices.

Examining the consumer's influence on the impact of the DPP could also prompt a further exploration. Consumers possess substantial influence on market dynamics through their purchasing habits, which are influenced by the information available to them. Future research could examine whether the DPP impacts consumers' purchasing intentions and their willingness to pay more for products that are perceived as sustainable or showcases transparency. This research could shed light on whether the DPP is reshaping consumer behaviour and steering market trends toward greater sustainability practices, thereby assessing its broader impact on business operations as well as on consumer decision-making. Such studies would provide an extensive understanding of the DPP's effectiveness in promoting sustainable consumer practices and improving corporate transparency.

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Appendix 1: Interview Guide

Part 1: Introduction and Background of Interviewee

Offer anonymization and confidentiality and ask permission to record the sound/video of the interview.

1. Introduce ourselves and the aim of the study.
2. The interviewee presents himself/herself.
 - a. Could you please describe your current position and role within the organisation?
3. In your role, how often do you engage with digital sustainability initiatives or strategies, specifically those related to product transparency and lifecycle management?

Part 2: Understanding of DPP and Its Implications

1. Are you aware of the DPP and its implications for your industry and organisation?
2. What is your understanding of the Digital Product Passport (DPP) and its objectives within the context of sustainability?
3. Have there been any significant changes in your organisation's approach to product transparency and sustainability before and after learning about the DPP?

Part 3: Impact of DPP on Business Strategy and Operations

Perceived implications of the DPP

1. From your perspective, what are the main opportunities and challenges/drawbacks that the DPP will present in your organisation?
2. How has the DPP, or the prospect of it, influenced decision-making processes and strategic planning in your organisation?
3. Can you discuss any specific adaptations your organisation has made in strategy or operations in anticipation of or in response to the DPP?
 - a. What motivated these changes?

Addressing Challenges and Implementation

1. If any, what challenges has your organisation faced in implementing changes related to the DPP?
 - a. How have these been addressed?
2. What do you think the timeline for implementing the DPP related aspects is within your organisation?
 - a. Do you think 18 months is a reasonable time?

Department related questions

1. Marketing: In terms of competitive advantage and brand differentiation, how do you see the DPP influencing your organisation's position in the market?
2. Supply Chain: How do you see the DPP affecting the supply chain?

- a. Do you think the DPP will trigger a reconsideration of suppliers?
 - i. If so, why?
3. *Sustainability management*: From your perspective, how do you see the DPP impact sustainability practices within your organisation?
4. *Product development*: From your perspective, do you see any changes in how your products might be developed or even conceptualised after the DPP has been taken into effect?

Part 4: Insights on Previous or Alternative Initiatives

1. Can you describe a past initiative such as the GDPR or the European Green Deal that your organisation has engaged with?
 - a. What prompted its adoption, and how was it implemented?
2. Reflecting on previous sustainability initiatives, what strategic or operational changes were necessary to accommodate these initiatives?
3. From those initiatives, what were some of the key benefits observed for your organisation?
4. Conversely, what drawbacks or challenges arose from adapting to past sustainability initiatives?
 - a. How did these impact your day-to-day operations and long-term strategy?

Part 5: Concluding Questions

1. What are your thoughts or insights about the role of sustainability initiatives in shaping the future of your industry?
2. Based on your experience with previous sustainability efforts, what advice would you give to a business looking to adapt to new sustainability regulations or initiatives like the DPP?
3. What steps do you think businesses should take to prepare for future sustainability initiatives?

Appendix 2: Consent Form

Thesis - Digital Product Passport

Jannis Maass and Lovisa Hansson

Interview Consent Form.

I have been given information about the thesis subject: *"DPP's Transformative Impact on Management Across Industries"* and discussed the research project with Jannis Maass and/or Lovisa Hansson who are conducting this research as a part of their Master's in Management supervised by Martin Blom.

I understand that, if I consent to participate in this project, I will be asked to give the researcher a duration of approximately 30-45 minutes of my time to participate in the process.

I understand that my participation in this research is voluntary, I am free to refuse to participate and I am free to withdraw from the research at any time.

By signing below I am indicating my consent to participate in the research as it has been described to me. I understand that the data collected from my participation will be used for my thesis only and will be deleted after completion, and I consent for it to be used in that manner.

Name:

Email:

Telephone:

Signed: