INSTITUTO
UNIVERSITÁRIO
DE LISBOA

Why and How Corporations Innovate their Business Model in Agribusiness?

Rute Sofia Barbosa Xavier Lino

PhD in Management, specialization Strategy and Entrepreneurship

Supervisor:
PhD Renato Telo de Freitas Barbosa Pereira, Assistant Professor with Habilitation,
ISCTE University Institute of Lisbon

2024, July 29th

BUSINESS SCHOOL

Why and How Corporations Innovate their Business Model in Agribusiness?

Rute Sofia Barbosa Xavier Lino

PhD in Management specialization Strategy and Entrepreneurship

Jury:
PhD Fernando Alberto Freitas Ferreira, Full Professor, ISCTE University Institute of Lisbon

PhD Filipe Manuel Simões dos Santos, Full Professor, Universidade Católica Portuguesa

PhD Manuel Duarte Mendes Monteiro Laranja, Associate Professor with Aggregation, ISEG Instituto Superior de Economia e Gestão, Universidade de Lisboa

PhD Nurul Indarti, Associate Professor, Universitas Gadjah Mada Indonesia

PhD Paulo Alexandre Bento Fernandes, Assistant Professor with Aggregation, ISCTE University Institute of Lisbon

PhD Renato Telo de Freitas Barbosa Pereira, Assistant Professor with Aggregation, ISCTE University Institute of Lisbon

Acknowledgements

À Inês, ao Diogo, ao Pedro e ao Luís.
Obrigada pelo apoio, pelo tempo e por estarem sempre lá.

À minha família.
Obrigada pelo apoio, por acreditarem sempre com orgulho e principalmente por me fazerem acreditar que era fácil.

A todos com quem trabalhei.
Obrigada por me empurrarem para este desafio, mesmo quando não sabiam que o estavam a fazer.

Ao meu orientador
Obrigada por me fazer crescer.

I appreciate the feedback received from editors, reviewers and professors:

- Systematic Literature review, accepted for publication in *The International Journal of Business and Emerging Markets*.

- Vitacress Case Study, published in *Proceedings of the 18th European Conference on Innovation and Entrepreneurship, part 2*. Academic Conferences International.

- Driscoll's Case Study, in reviewing process in *Business Strategy and the Environment*.

- Professor Atul Nerkar (Kenan-Flagler Business School, University of North Carolina at Chapel Hill) for his precious feedback to the research of this thesis on a doctoral colloquium from STR – Strategic Management (*Academy of Management*).

- Aline Gatignon (The Wharton School, University of Pennsylvania) for her precious feedback to the research of this thesis on a doctoral colloquium from STR – Strategic Management (*Academy of Management*).

[This page is deliberately left blank]

Abstract

Agribusiness, a crucial component of the global economy, is undergoing significant changes driven by technological advancements, shifting consumer preferences and increasing sustainability demands. Business model innovation has emerged as a vital strategy for firms to achieve long-term success and remain competitive. This thesis investigates how agribusiness firms use business model innovation to navigate the rapidly changing business landscape and identifies the motivators and drivers that may foster their innovation efforts. The study examines the impact of varying market dynamism levels and internal organizational dynamics on business model innovation.

Using a multi-case study approach, this research analyzes four agricultural firms: Vitacress, Driscoll's, SP&F and Camposol. The theoretical framework by Ghezzi and Cavallo (2020) is employed to understand how these companies pursue business model innovation in different market dynamicity conditions and different internal dynamics.

The findings are organized around a set of propositions that besides value creation, delivery and capture (Teece, 2010) – profitability (widely investigated by academia) - risk management and sustainability are significant motivators of business model innovation. Also, firms with high internal dynamism seem to foster entrepreneurial cultures and continuous improvement following lean principles, while all cases emphasize adaptability and agility. Agility and lean principles are found to be crucial in fostering business model innovation, enabling firms to innovate, adapt and thrive in dynamic environments. The study's insights have important implications for practitioners, policymakers and researchers, highlighting the need for a holistic approach to business model innovation that integrates economic, environmental and social considerations.

Key-words: Business Model Innovation; Multi-Case Study; Agribusiness; Strategic innovation; Value creation; Risk Management; Sustainability

JEL: O13; O31

O13: O: Economic Development, Innovation, Technological Change and Growth

O1: Economic Development

O13: Agriculture • Natural Resources • Energy • Environment • Other Primary Products

O31: O: Economic Development, Innovation, Technological Change and Growth

O3: Innovation • Research and Development • Technological Change • Intellectual Property Rights

O31: Innovation and Invention: Processes and Incentives

Resumo

O agronegócio, uma componente fundamental da economia global, está a sofrer mudanças significativas impulsionadas pelos avanços tecnológicos, pelas mudanças nas preferências dos consumidores e pelas crescentes exigências de sustentabilidade. A inovação do modelo de negócio emergiu como uma estratégia vital para as empresas alcançarem o sucesso a longo prazo e manterem-se competitivas. Esta tese investiga a inovação do modelo de agronegócio e identifica os motivadores e impulsionadores que promovem os seus esforços de inovação. O estudo examina o impacto dos diferentes níveis de dinamismo do mercado e da dinâmica organizacional interna na inovação do modelo de negócios.

Utilizando uma metodologia multi-case study, analisa quatro empresas: Vitacress, Driscoll's, SP&F e Camposol. O enquadramento teórico de Ghezzi e Cavallo (2020) é empregue para compreender como estas empresas procuram a inovação em modelos de negócio em diferentes condições de dinamicidade de mercado e diferentes níveis de dinâmica interna.

Os resultados estão organizados em torno de um conjunto de proposições que, para além da criação, entrega e captura de valor (Teece, 2010) – rentabilidade (amplamente investigadas pela academia) - a gestão de risco e sustentabilidade são motivadores da inovação em modelos de negócios. Além disso, as empresas com elevado dinamismo interno parecem promover culturas empreendedoras e melhoria contínua seguindo princípios Lean, enquanto todas enfatizam a adaptabilidade e a agilidade. Os resultados do estudo têm implicações importantes para os profissionais, decisores políticos e investigadores, realçando a necessidade de uma abordagem holística à inovação do modelo de negócio que integre considerações económicas, ambientais e sociais.

Palavras Chave: Inovação de Modelo de Negócio; Multi-Case Study; Agronegócio; Inovação Estratégica; Criação de Valor; Gestão de Risco; Sustentabilidade

[This page is deliberately left blank]

Contents

[This page is deliberately left blank]

Table of Figures

[This page is deliberately left blank]

Chapter 1: Introduction

1.1 Research Background

In an era marked by rapid evolution, organizations must continuously adapt and evolve their business models to stay competitive given the accelerating speed of technology change, changes in client preferences and changing market dynamics (Foss and Saebi; Bocken and Snihur, 2020; Bocken and Geradts, 2020; Schumpeter, 1934; Chesbrough, 2010; Hamel, 2006; Kim and Mauborgne, 2014; Bohnsack et al. 2021). Corporations began tackling these challenges through business model innovation, which enables companies to develop fresh and distinctive methods of providing value to clients. Organizations can acquire a competitive edge, disrupt sectors and promote sustainability by utilizing digital technologies, questioning conventional business practices and concentrating on consumer requirements and preferences (Teece, 2010; Amit and Zott, 2010; Amit and Zott, 2012).

Scholars have shown an increasing interest in the concept of business model innovation in situations that are characterized by extremely dynamic markets and significant unpredictability (Blank, 2013; Schoemaker et al., 2018). The scholarly inclination is evident in the publications like Amit and Zott (2001, 2010), Foss and Saebi (2017) and Sjödin et al. (2020).

Since the early 2000s, several scholars have put forth various definitions of business model innovation. Notable contributors include Amit and Zott (2012), Casadesus-Masanell and Zhu (2013), Gambardella and McGahan (2010), Khanagha et al. (2014), Markides (2013), Santos et al. (2009) and Sorescu et al. (2011). The importance of establishing the unit of analysis is well recognized among researchers (Suddaby, 2010). These authors agree that it is imperative to employ well-defined and distinct ideas, as well as accurately establish causal linkages and associations between constructs.

The concept of a business model and the process of business model innovation are both relevant areas of study within the field of business management. A business model refers to the architecture that outlines how a company creates, delivers and captures value (Teece, 2010). It encompasses several elements such as the organization's value proposition.

The origins of the concept of the business model have been a topic of scholarly discussion. Some researchers, such as George and Bock (2011) and Lecocq et al. (2010), trace its origins to business practice. However, the original definition was associated with the operational practice of system modeling inside the realm of information technology (Wirtz et al., 2016).

The concept has experienced a notable increase in prominence during recent years. In the 1990s, researchers in the disciplines of Strategy and Entrepreneurship initiated the construction and application of a comprehensive conceptual framework aimed at comprehending the diverse business processes of organizations and their interdependencies in the creation of value (Teece, 2010; Zott et al., 2011).

However, the lack of a specific framework for business models in the field of Economics leads to a scarcity of well-defined theoretical underpinnings for business model innovation. Teece (2010) argues that the limited consideration given to this component in Economic theory can be attributed to the dominant belief that any challenges are resolved either through or inside the market, with business models emerging as a mechanism to internally address these difficulties within the organization.

In 2004, Osterwalder created a Business Model Ontology, in which he provides a comprehensive explanation and representation of business models, thus laying the foundation for numerous concepts and tools. The author provides a detailed explanation of the fundamental principles governing conceptual frameworks in the specified context (Osterwalder, 2004).

Osterwalder and Pigneur (2010) conducted a thorough analysis of the process for existing business models in corporation, as recorded in their publication titled "Business Model Generator". The authors systematized and reinforced that improving the robustness of these models can ensure the organizations' long-term success. Moreover, the authors emphasized the importance for organizations to proactively adjust to circumstances, highlighting the importance of building strategies to successfully tackle future challenges.

Authors like Teece (2010) and Zott et al. (2011) have conducted studies using the Resource Based Theory to research how business model innovation affects the corporation success. These studies shed light on the importance of business model innovation as a crucial factor in achieving success.

In academic discussion, the concept of business model has undergone substantial research and analysis in recent years (Wirtz et al., 2016; Sjödin et al., 2020), leading to the emergence of many definitions for this concept.

Zott and Amit (2008) claim that a structural template refers to a conceptual framework that outlines the way which a company interacts with its clients/customers, vendors and partners. Ghaziani and Ventresca (2005) propose that different conceptualizations of the term pertain to the modality through which an organization procures its financial resources.

Nevertheless, it appears to be a general convergence among various definitions regarding the concept of business model as the "*design or architecture of the value creation, delivery and capture mechanism*" of a corporation (Teece 2010) and this is the definition we adopted in this research.

In what concerns (not only the business model study, but) to the innovation on the business model, academic researchers have undertaken investigations into the concept starting mainly from the year 2001. These studies have mostly centered on its theoretical underpinnings within the field of Strategic Management. Notably, scholars have explored its connections to established theories such as Transaction Costs Theory, Resource Based View Theory, System Theory and Strategic Network Theory. According to the pioneering work of Foss and Saebi (2017), the notion of business model innovation pertains to deliberate and innovative alterations made to the core elements of a business model.

1.2 Research Problem

This research intended to analyze how corporations are being encouraged to reinvent their business models in order to achieve long-term success in the quickly evolving agribusiness landscape of today. It also explores the motivations and drivers of this strategy when corporation plays a more moderate or a more dynamic role; or plays in a more moderate or more dynamic environment.

This thesis aims to investigate the relevant field of business model innovation in the agribusiness sector, with the objective of developing a complete framework that promotes sustainable growth, resilience and competitiveness. Through the examination and consolidation of data obtained from research involving multiple cases, our objective is to reveal relevant motivators and drivers on the complexities of business model innovation. This endeavor seeks to provide tangible tools and shed light on implementable tactics for those involved in corporations, as well as politicians and academics.

Drilling the research problem, we aim to contribute to the discussion and enrich the knowledge of the business model innovation problem detailing the research questions:

1. How agribusiness organizations operating in dynamically evolving environments exhibit a higher (if so) propensity for business model innovation compared to those in more stable environments?

This question aims to investigate the relationship between environmental dynamism and the propensity of agribusiness firms to participate in business model innovation. The research

aims to discover patterns and characteristics that influence the adoption of innovative business models in response to external dynamics by examining diverse cases in distinct environmental conditions.

2. How does the internal dynamism of agribusiness organizations affect their capacity to develop, execute and maintain business model innovations in the long run?

This question intends to analyze the internal factors that either support or are an obstacle to the innovation of business models in agribusiness. The research examines the influence of organizational culture, leadership styles, employee engagement and other internal factors on a company's capacity to innovate its business models and adapt to changing circumstances.

3. What are the motivators and drivers of business model innovation in the agribusiness sector and how do these aspects vary depending on the degrees of external and internal changes in organizations?

With this question, we aim to investigate the factors that contribute to successful innovation of the business model in the agribusiness sector and how these principles may differ based on the degree of environmental and internal dynamism of the organization.

1.3 Why Agribusiness?

Agribusiness includes farming, commerce and associated operations. It involves a broad variety of activities including the production, processing, distribution and marketing of agricultural commodities (Gardner, 2001). This sector combines simultaneously corporations rooted in history and tradition with corporations characterized by innovation. The sector main challenge is to support the fast-growing global population while also addressing pressing environmental concerns (Norton et al., 2021). The need for business model innovation is not only a question of choice, but rather essential to support this challenge.

In light of the current circumstances marked by climate change, resources availability, shifts in demographics and health concerns, the agriculture sector finds itself at a critical moment (Norton et al., 2021).

When considering various industries, agriculture may not appear as the immediate or apparent choice to study business innovation, as many individuals still hold onto outdated perceptions of the sector based on its early 20th-century portrayal.

The selection of the agriculture sector as a subject of research within the topic of business model innovation is based on its historical and continuous evolution, as well as the co-existence

of corporations playing in different maturity levels (Norton et al., 2021; Johnson,1996; Gardner et al. 2021; Berry, 2021):

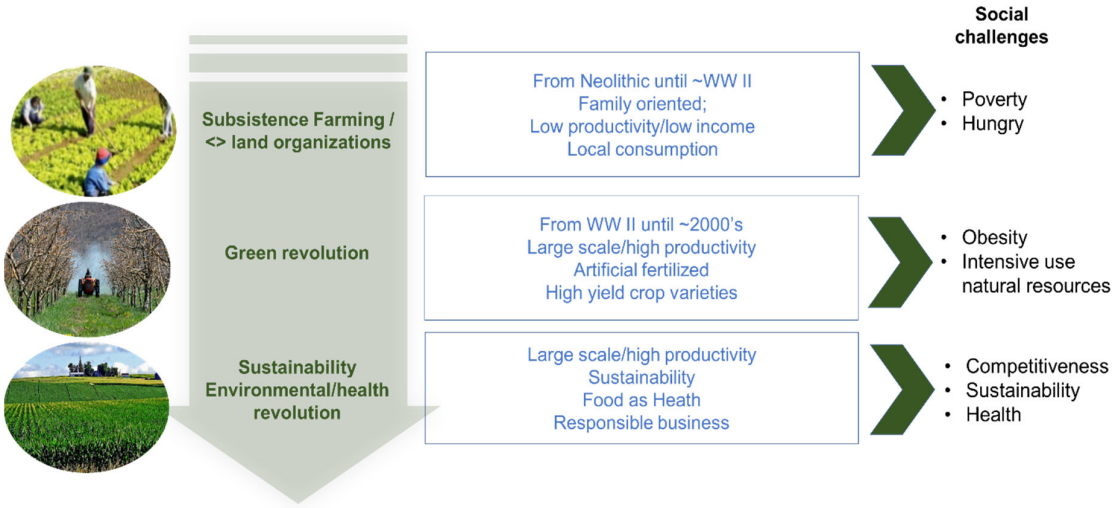

Figure 1.1 - Agribusiness Along the History

Source: Norton et al., 2021; Johnson,1996; Gardner et al. 2021; Berry, 2021; adapted

From a historical perspective, agriculture is a very rich sector that has evolved from a basic survival-oriented strategy to a technologically advanced and sophisticated sector (with sophisticated corporations) that embraces the latest technology, information and technical breakthroughs. In addition to this diverse history, it is possible to observe the simultaneous presence of businesses operating at varying stages of maturity:

- Subsistence based agriculture

Agriculture has historically been linked to subsistence farming, wherein households primarily participate as self-employment, typically typified by small-scale, low-production endeavors centered around local consumption. The traditional (historical) agriculture structure frequently exhibited a prevalence of meager earnings and presented a substantial societal challenge, namely the presence of poverty and hunger. The pressing problem at hand was the inadequacy in meeting population food necessities, with the majority of agricultural endeavors primarily focused on immediate subsistence (Berry, 2021; Johnson, 1996).

- The green revolution

The Green Revolution, a significant agricultural movement, emerged in the aftermath of World War II. During this particular period, there was a notable transition from subsistence farming to the adoption of extensive agricultural methods that were distinguished by their

significant productivity levels. The implementation of chemical fertilizers and the advancement of high-yield crop types have played a pivotal role in driving a substantial growth in agricultural output. The Green Revolution effectively tackled the issue of hunger and poverty through its efforts to enhance food production. However, it inadvertently led to unexpected social challenges, most notably the rise in obesity and related health concerns resulting from excessive calorie intake and other associated diseases and natural resources over exploration (Gardner et al., 2021; Evenson and Gollin, 2003).

- Contemporary Agribusiness trends

In recent times, the agricultural sector has been experiencing a significant shift due to the changing demands of the market. There is an increasing focus on the implementation of large-scale, high-yield agricultural practices, motivated by the necessity to sustainably provide food for a continuously growing global population. Nevertheless, the contemporary agricultural industry acknowledges the necessity of implementing ecological, health-conscious and economically viable methodologies. The recognition of the significance of connecting agricultural activities with the Sustainable Development Goals (United Nations, 2015) is being expressed (Gardner et al. 2021, Berry, 2021; Norton et al., 2021).

Currently, the agriculture industry is widely recognized as a very innovative market, with a specific focus on the innovation of business models (Norton et al.2021).

The achievement of rapid and efficient production-market fit is contingent upon the dynamic nature of markets and evolving consumer preferences. In order to maintain competitiveness and respond to societal and environmental challenges, agribusiness corporations must innovate their business models to align with these changing demands. The ever-changing markets and environment require a flexible strategy.

Agribusiness is being pressured to consider environmental sustainability issues with economic sustainability (Gardner et al. 2021). The heavy use of natural resources during the Green Revolution period has raised ecological concerns, leading to a focus on sustainable practices.

The idea of sustainability encompasses both environmental factors and economic feasibility, emphasizing the need of attaining a balanced state of profitability and ecological accountability (Gardner et al. 2021).

The growing focus on the development of healthy and nourishing food is driven by the need to tackle population health issues, while simultaneously adapting to the changing dietary preferences of consumers and convenience of products consumption.

The adherence to the Sustainable Development Goals (SDG) established by the United Nations (United Nations, 2015) encompasses a comprehensive international framework aimed at tackling pressing concerns such as poverty, hunger, health and environmental sustainability.

Current stage of agribusiness industry clearly covers all SDG. Agribusiness assumes a pivotal position in the attainment of these objectives and shows a central focus for the innovation of business models with the intention of contributing to the Sustainable Development Goals, which is seen with concern by some population that perceives it as an intention to improve its reputation and brand awareness (Gardner et al. 2021).

Currently, the agribusiness sector finds itself at a critical development point, leading with a range of urgent concerns such as the imperative for sustainable practices, the promotion of health-conscious production methods, creating economic value and the achievement of Sustainable Development Goals. The sector's dynamic characteristics and the pressing necessity to innovate business models in response to these problems highlight its importance as a subject of study and innovation (Gardner et a., 2021; Norton et al., 2021; Schumpeter, 1942).

In conclusion, the agribusiness is regarded as an ideal field for study business model innovation for various factors. This industry demonstrates a distinctive amalgamation of attributes and corporation with diversity that foster the implementation of new business models, which are crucial for the investigation:

1. Complexity

The agribusiness sector is characterized by its sophisticated complexity, as it encompasses a wide set of various (and very diverse) players. This encompasses those involved in agricultural production, processing, distribution and sales, as well as other stakeholders operating throughout the entire supply network. The complex network of stakeholders and their respective interests provides significant opportunities for corporations to search for innovative approaches to collaboration, thereby improving the operational efficiency and overall effectiveness of the supply chain. The agribusiness sector includes complexities that create an environment for the development and execution of new business strategies and new business models.

2. Value chain integration

The agricultural sector has a very fragmented value chain, characterized by the presence of multiple separate players operating within it. Additionally to this complex system, agribusiness products frequently exhibit a limited duration (product quality changes very quickly as most products tend to perish fast), hence requiring demanding timeframes from production/crop until

delivery and consumption. The need to effectively organize this value chain while simultaneously ensuring fast delivery, fosters an environment conductive to the innovation of business models. Organizations are obligated to change and propose new strategies in order to lead the difficulties presented by the perishability of goods and the strict limitations on time.

3. Technology

Agribusiness is experiencing a significant technological revolution. These corporations are adopting top-notch investigation/research and technology. The landscape is being transformed by various advancements, including precision agriculture, biotechnology, augmented reality, artificial intelligence and other digital technologies. These improvements present novel and innovative opportunities for creating value to clients, improving the efficient use of resources (water, fertilizers, land, human resources and others) and optimizing different phases of its operations. The industry's progress, driven by technology, offers a favorable opportunity to explore and experiment with new business models that leverage these advancements.

4. Sustainability

The agribusiness sector is seriously impacted by sustainability concerns. The industry is characterized by the emphasis on concerns related to resource depletion, environmental degradation and social responsibility. All these factors (environment, environment and people) are primary and direct resources that allow continue to sustain successful operations. These challenges require the creation of value through sustainable business models. Given the aforementioned constraints, agribusiness is compelled to engage in new practices and processes in their business models. This imperative stems from the need to not only maintain competitiveness and operation besides also effectively tackle customer pressing sustainability concerns.

5. Diverse market dynamicity

Agribusinesses exhibits a wide array of market characteristics. In the same sector, there are examples that demonstrate different degrees of dynamism, ranging from moderate to high levels. Additionally, there are circumstances where market dynamics are susceptible to change or are influenced by external dynamism. The presence of diverse market dynamics highlights the necessity for adaptability. We can easily find firms that are consistently assessing and adapting their business models in order to fit with the particular market conditions they experience. The presence of different corporations and market dynamics poses problems and opportunities for organizations, hence prompting them to innovate their novel business models that are specifically designed to suit these particular situations.

In summary, the agribusiness sector presents itself as a very suitable laboratory for analysis in the context of business model innovation, due to its distinctive diversity of attributes. The complex nature of the industry, the necessity for efficient value chain integration, improvements in technology, pressuring concerns over sustainability and the variety of market dynamics collectively contribute to the dynamic and continually changing nature of the sector. These characteristics highlight the need for agribusinesses to consistently investigate and adopt new business models in order to remain competitive and prosper in this complex setting.

1.4 Research Methods

Our study is supported on a multiple case studies methodology (Eisenhardt, 1989; Yin, 1984) to provide a thorough understanding of the complexities of business model innovation within agribusiness. In this study, we analyzed four corporations, each of which operating in distinct markets and scenarios and distinguished by their respective internal roles.

The use of this methodology enabled us to investigate the various elements that motivate and drive business model innovation in agribusiness.

Case selection and rational

Four agribusiness firms were chosen for analysis based on their levels of dynamism (moderate or dynamic) and the specific internal contexts in which they functioned (moderate or dynamic environment). We proceed the cases theoretical selection (Strauss and Corbin, 1998) in order to guarantee a comprehensive and diverse set of cases that would provide insights into the factors influencing business model innovation across various contexts. The framework proposed by Ghezzi and Cavallo (2020) to study the business model innovation in technological startups, was used to explain and explore the drivers of business model innovation in incumbent and established firms, in four different scenarios.

Data collection

In order to gain comprehensive insights, we conducted field visits to each corporation, in-depth semi-structured interviews with relevant stakeholders from each of the four organizations that were selected for this study and archival data was analyzed.

In each one of the analyzed corporations, we conducted field visits that allowed us to perform field observation on the daily and routine operations and acquire pertinent data regarding the corporative culture, leadership, agribusiness procedures and methodologies employed.

The conducted interviews yielded significant qualitative data pertaining to the strategies, decision-making processes and innovation initiatives of the corporations analyzed.

The field visits and interviews were complemented by document analysis in which, the researchers gathered and conducted an examination of pertinent documents, including reports and internal records, obtained from each firm and available publicly. The aforementioned texts provided valuable perspectives on their historical approaches to conducting business, endeavors in fostering innovation and obstacles peculiar to each industry and allowed data triangulation.

The use of three different types of data sources facilitated the data triangulation, the data validity and reliability and the acquisition of a more profound comprehension of their internal mechanisms and the cases under study.

Data Analysis

The data collected was analyzed using qualitative research, including pattern/thematic analysis (Gioia et al. 2013; Saldaña, 2021, Braun and Clarke, 2006). Themes were identified with recurring patterns pertaining to the drivers of business model innovation within the collected data.

Scenarios

The four corporations were selected assuming (analyzed and confirmed later) they were operating into the four distinct scenarios according to their respective roles and the characteristics of their working settings (Ghezzi and Cavallo, 2020):

- Dynamic corporation and dynamic environment: The scenario focused on firms that were proactively adjusting their business strategies in order to effectively respond to fast transformations occurring within their respective industries or markets. The focus behind innovation in this context was primarily driven by the defining new value propositions and the pursuit of competitive advantage.
- Dynamic corporation and moderate environment: In the context of a moderately dynamic environment and corporations showing dynamic internal roles while operating within relatively stable external settings. The business model innovation within this particular scenario were shaped by the internal dynamics of the firm, including elements such as leadership and organizational culture.
- Moderate dynamic role corporation, in a dynamic environment: in the given context, corporations functioned within dynamic and competitive contexts, yet their internal processes and tactics exhibited a greater inclination towards moderate dynamicity. The

focus for business model innovation in this context frequently originated from external forces and the imperative to maintain competitiveness.

- Moderate dynamic role corporation in moderate dynamic environment: corporations operating within a moderately dynamic environment demonstrated a tendency towards conservative business models, characterized by a cautious approach to decision-making and risk management. These corporations primarily worked in environments that were characterized by a relatively stable and predictable business climate. In this particular setting, the drivers of innovation were commonly characterized by a lesser sense of urgency and a greater emphasis on enhancing operational efficiency.

Cross-case analysis

In order to derive a more comprehensive understanding of how corporations are being encouraged to reinvent their business models in order to achieve long-term success, a cross-case analysis was performed to find shared patterns and divergences among the four cases. This analysis facilitated the clarification of the primary motivators and drivers for business model innovation in agribusiness, while also providing valuable observations regarding the complex interaction between internal and external influences.

In brief, our study used a multi-case study approach to investigate the factors that influence business model innovation within agribusiness. Through the analysis of four distinct cases, a full comprehension of the various factors that impact in both dynamic and moderate roles within dynamic and moderate environments was acquired. By employing this methodology, we were able to elucidate the complexities of business model innovation within the agribusiness and provide significant contributions to the existing body of knowledge in this domain.

1.5 Relevance of the Study

The relevance of this industry arises from its substantial influence on global economies, food security, sustainability and environmental considerations.

The examination of business model innovation in the agribusiness holds significant relevance when considering academic, social and corporate practice viewpoints. In the following sections, we will provide a detailed clarification of the significance of this work within each of these audiences:

Academic relevance

The academic research of business model innovation in the agribusiness enhances our comprehension of how enterprises within this sector can effectively adjust and prosper within

a dynamic global environment. These cases analysis facilitate the exploration of complex aspects related to agribusiness value chains, improvements in technology and the dynamic nature of customer preferences.

This study encompasses various academic fields (interdisciplinary perspectives), including Agriculture, Economics, Management and Sustainability. Consequently, it promotes interdisciplinary cooperation and nurtures a comprehensive comprehension of the issues and prospects in the field of agribusiness.

We contribute to clarify the still fuzzy academic knowledge of business model innovations. The analysis contributes to the clarification of what drives and motivate corporations to innovate their business models.

This study allows to explain and contribute to improve the Ghezzu and Cavallo, 2020 framework that supports it.

Finally, it explores the richness of the contemporary agribusiness industry, an industry barely studied in Management field.

Social relevance

The agribusiness plays a crucial role in ensuring global food supply and food security. Business model innovation has the potential to effectively tackle pressing global challenges, like the growth of global population, climate change and resources scarcity, through the promotion and implementation of sustainable and efficient farming techniques.

There is a growing emphasis among policymakers on the concept of improving effectiveness of agribusinesses to ensure the provision of sufficient food to accommodate a growing population, while maintaining reasonable prices and using an astute and effective resource management. The research conducted in this particular field of business model innovation yields the necessary knowledge for the formulation and execution of policies that promote agribusiness practices through business model innovation, that allow to achieve these goals.

Agribusiness plays a substantial role in the economic growth of numerous nations. The implementation of new agribusiness business models has the potential to foster increased productivity, generate employment opportunities and stimulate economic expansion, all of which are fundamental objectives within the realm of politics.

Corporate Practice relevance

The ability of agribusinesses to adapt and renew their business models can offer them a competitive advantage in the market. This may encompass strategies such as expanding the

range of products offered, new value propositions and optimizing the efficiency of the supply chain or implementing technology-based solutions to improve operational processes.

The final customer is demonstrating a growing interest in the ecological and societal consequences associated with their food decisions, hence emphasizing the importance of food quality. In order to sustain their market position, agribusinesses must connect their operations with these issues, hence emphasizing the importance of business model innovation.

The agribusiness sector is associated to a range of difficulties and vulnerabilities encompassing fluctuations in climatic patterns, outbreaks of diseases and disruptions in the supply chain, among others. Companies that possess the ability to adjust their business models are more strategically positioned to endure and tackle these challenges.

The exploration of global markets may be facilitated by agribusinesses that employ innovative approaches. To meet the demands of international customers and emerging markets, new strategies in production and distribution can be employed.

In summary, the analysis of business model innovation within the agribusiness holds substantial academic, social and corporate practical importance. This phenomenon facilitates the expansion of knowledge, tackles political priorities such as ensuring food quality, security and sustainability and enables agribusinesses to flourish among the dynamic shifts occurring in our society.

In a time period characterized by the pressing need to address the sustainable feeding of an expanding global population, this field of research emerges as a crucial foundation for advancing economic, environmental and social development. Therefore, it presents a promising domain for scholarly investigation and real-world implementation.

1.6 Organization of the Thesis

The primary purpose of this initial chapter is to present a comprehensive summary of the research, including its contextual background, significance and specific objectives. This part presents the research problem and provides a justification for undertaking the investigation.

The Systematic Literature Review, found in the second chapter, entails a thorough analysis of previously published scholarly literature and research that pertains to the subject matter of this study. This chapter exhibits the expertise and knowledge in the area, while also highlighting the deficiencies in the current body of literature that this research intends to fill. The theoretical underpinning of a study is essential since it gives a framework for understanding and interpreting the research situation, hence offering valuable insights. We elaborate on topics as

business model concept and business model innovation, the drivers of business model innovation found in literature; the motivators of business model innovation; what academia shares about why and how corporations innovate their business model; and we finalize the chapter with a short review about concept used in the analysis as agile principles, lean principles and leagile principles.

Chapter 3, with Methodology, clarifies the methods and procedures conducted in the analysis. This chapter provides an overview of the research design, data collection procedures, data analysis strategies and the software and instruments used in the study. Providing a comprehensive and unambiguous account of the methodology employed is crucial in order to establish the validity and reliability of this study.

In Chapter 4, the Case Analysis chapter, we present the research analysis and findings derived from the collected data and the techniques outlined in the preceding chapter. This component encompasses the utilization of data interpretation, pattern analysis. As proposed by Eisenhard (1989), Gioia et al. (2012) and Saldaña (2019), we start with the single case analysis, in which we describe each one of the cases, perform the pattern analysis and derive the coding tree and elaborate on the conclusions of each one of the single case studies.

After the four single case-studies analysis, we elaborate a cross-case analysis to understand the differences and patterns among the study, providing content to the following discussion chapter.

The Discussion chapter (Chapter 5), entails a critical analysis and contributes to the discussion of the findings, providing a set of propositions and proposing a reformulated framework of motivators, drivers and principles of business model innovation,

The content of this discussion is provided by the content of the preceding chapter.

The discussion provides a comprehensive explanation of the obtained results, discusses and establishes their relevance to the research inquiries and aims. It also takes into account the extent to which the findings corroborate with or contradict the existing body of literature and theories expounded upon previous research.

The concluding chapter, referred to as Chapter 6, fulfills the purpose of providing a comprehensive summary of the primary findings and contributions made throughout this research. Namely we contribute to this chapter with the summary of the key findings, the discussion of the results and the discussion of the research questions. We summarize the theoretical, practical and social implications and we end the chapter with the acknowledgement of some limitations of the study and offers indications for future research.

Chapter 2: Systematic Literature Review

The business model concept is thought to have been originated from corporate practice (George and Bock, 2011; Lecocq et al., 2010). However, it has only attracted significant attention in recent years, as observed by Spieth et al (2014), Chang and Matsumoto (2022) and Pitelis (2022). During the 1990s, scholars in the fields of Strategy and Entrepreneurship initiated the development and implementation of a more extensive depiction of a corporation's business models and their interconnectedness in generating value (Zott et al., 2011).

The existing body of literature on business model innovation has found multiple elements that motivate organizations to engage in the exploration of novel business models.

According to Foss and Saebi (2017), there is a noticeable absence of a widely acknowledged and robust theoretical framework in the realm of business model innovation among the academic community. The absence of a cohesive theoretical framework is apparent and broadly referred (as Teece, 2010; Chang and Matsumoto, 2022 and Pitelis, 2022).

In order to address this matter, we followed the suggestion proposed by Tranfield et al. (2003) and conducted a thematic analysis utilizing identified first-order codes to support our discussion on the theories that form the foundation of business model innovation, its definitions, components and the elements of analysis.

2.1 Aim and Systematic Literature Review Research Problem

This systematic literature review aims to explore the present state of the art on business model innovation by examining the existing literature and its evolution over the years. The research seeks to provide a complete overview of the conceptualization and understanding of business model innovation by identifying the main foundation, topics, trends and gaps in recent investigations.

We could also find the factors that foster business model innovation in organizations, focusing on the drivers and motivators.

We investigate external factors referred in literature, such as technical improvements, regulatory changes and market dynamics that influence the adoption of innovative business models, but also investigate internal organizational characteristics like leadership, culture and competencies to understand their impact on promoting or impeding business model innovation in agribusiness businesses. Understanding these factors offers valuable insights into the complex dynamics of innovation.

This literature research led to two main research questions: Which theories ground business model innovation and what does academia proposes as factors that motivate and drive business model innovation? The initial pattern comprises the theoretical framework that serves as the basis for the analysis, while the subsequent pattern drives attention towards the strategic, organizational and external elements that drive and motivate business model innovation.

2.2 Methodological Approach

Business model innovation is a complex topic that is influenced by a range of internal and external drivers. A systematic and structured technique is offered by systematic literature review to effectively synthesize a broad range of knowledge derived from many sources Liberati et al. (2009).

This study serves as an extensive scholarly pursuit, aiming to uncover deficiencies in the existing body of literature and offer a full comprehension of the present condition of business model innovation in organizations. We present a comprehensive outline of the systematic procedures encompassing database selection and data synthesis, aiming to establish a strong and reliable basis for our research.

This methodology enables the comprehensive examination of a wide range of previous research, facilitating the identification of patterns, inconsistencies and areas of knowledge that have not yet been explored. Ultimately, it contributes to the development of a thorough comprehension of the subject.

We conducted a systematic literature review using the PRISMA method (Liberati et al., 2009).

The initial step of the process involves planning.

The exploration of the electronic platforms was limited to the Clarivate Web of Science Platform. The selection of this particular platform was based on its extensive inclusion of databases containing peer-reviewed publications and its prevalent utilization in conducting meticulous systematic reviews. This platform allowed us to have access to a comprehensive range of academic work originated from the best quality research journals.

Given the growing importance of business model innovation as a noteworthy topic, as well as being a recent topic in Management and Entrepreneurship fields, our investigation was not constrained by any specific temporal boundaries.

The second step, as Figure 2.1 illustrates the selection phase process, showcasing the PRISMA flow diagram as outlined by Liberati et al. (2009). The process of selecting articles written in English that refer the concept of "business model innovation" or its equivalent.

To define the equivalent strings, we followed Foss and Saebi (2017) and considered the identification of all relevant papers selecting strings like “business model innovation”, “business model renewal”, “business model dynamics”, “business model transformation”, “business model evolution” or “innov* business model” (Foss and Saebi, 2017). Only English language articles were considered for the analysis.

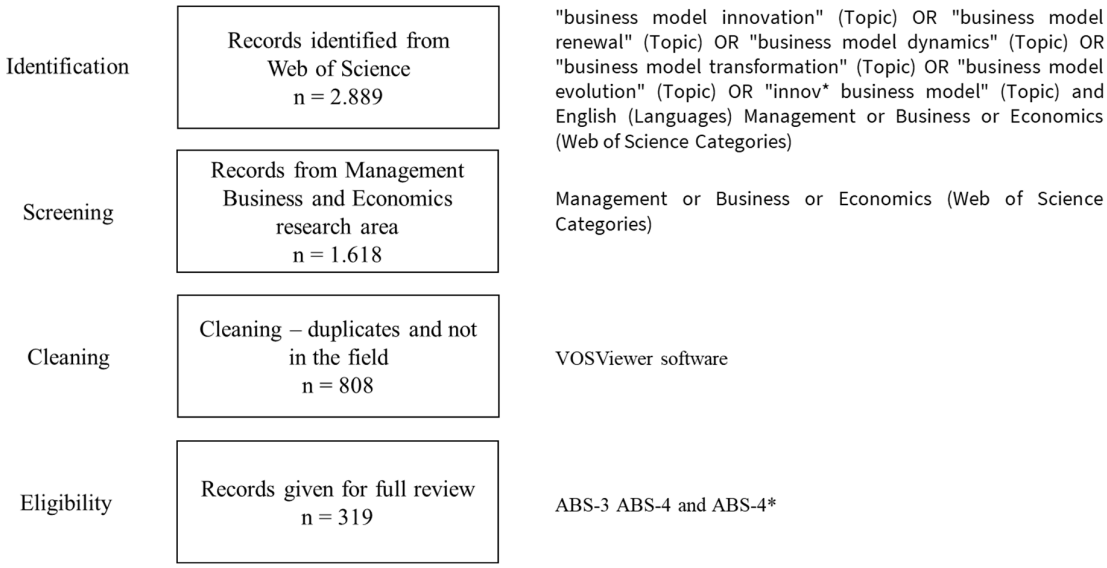

Figure 2.1 - PRISMA Flowchart

Source: Own creation based on Liberati et al. (2009)

A complete compilation of 2.889 records was assembled. The notion of business model innovation has garnered considerable scholarly interest since its introduction. This is apparent from the significant rise in the number of scholarly articles year after year and critical reviews devoted to this subject matter. Prior to 2012, there was a scarcity of literature in the field. The topic has been the subject of a growing body of scholarly work and we can identify the research from Amit and Zott (2012) who conducted a notable study that made major contributions and received substantial citations and references in the field.

Subsequently, we conducted a focused investigation by restricting our inquiry to the field of Management, Business and Economics within the Web-of-Science category. This process

yielded a total of 1.618 registers. To ensure the integrity of the data, we employed the VOSViewer software to identify replicated articles.

In addition, we enhanced the search process by doing an initial preliminary reading of the titles and abstracts to exclude papers that were not the subject of the analysis, resulting in the identification of 808 distinct articles.

Due to the substantial volume of research conducted primarily following 2012, we have refined our research to concentrate on the most high-quality studies. The ABS (Academic Journal Guide) classification was utilized as a criterion for the selection of papers to be examined in this study. The primary focus of our study revolved around scholarly literature, commonly known as articles, that have received ABS classification of ABS-3 or higher. A dataset including 319 scientific publications that were published between the years 2005 and 2024 was chosen for analysis.

After these steps, a thematic analysis, using MaxQDA software, was conducted, as a qualitative research method that involves identifying and analyzing patterns or themes within a dataset (Gioia et al. 2012; Saldaña, 2009, Braun and Clarke, 2006). In our study, we employed the method of thematic analysis to discern and examine recurring patterns and themes present in the qualitative data (articles content). Following the guidelines proposed by Braun and Clarke (2006), we implemented a methodical and iterative strategy to ensure the robustness and reliability of our study. To ensure accuracy and consistency in our data analysis, a set of protocols has been developed, encompassing data coding and theme identification.

The preliminary stage of our data analysis entailed the utilization of open coding methodologies. The methodology involved a thorough analysis of specific data elements, such as abstracts of papers, with the aim of identifying and developing early codes and themes. Following this, we proceeded with the endeavor of improving and optimizing the original algorithms, resulting in the emergence of additional conceptual and abstract themes that could be efficiently utilized throughout all papers included in the dataset.

To bolster the legitimacy and reliability of our research findings, we employed distinct methodological approaches, namely triangulation (to cross-check information and ensure a comprehensive understanding), reflexivity (reflected on own biases and how these may have affected the analysis), audit trail (maintained a detailed record of all research decisions, steps and changes throughout the review process - partially described in this chapter - documenting the search strategy, selection criteria and rationale for including/excluding studies) and clear and transparent protocols (detailed protocols defined and recorded for data collection, coding

and analysis – partially described in this chapter) (Braun and Clarke, 2006; Mason, 2017; Saldaña, 2009). These metrics were essential in enhancing the reliability of our findings and raising the overall quality of our research.

The circumstances indicated above led to the development of an initial conceptual framework that revealed multiple elements. Following that, consecutive rounds of focused coding were conducted in order to guarantee comprehensive examination of all the emergent categories and achievement of data saturation, in accordance with the guidelines set forth by Saldaña (2021).

2.3 Business Model

The roots of the Business Model concept have been the subject of academic discussion. The origins of this concept have been attributed to corporate practice by authors such as George and Bock (2011) and Lecocq et al. (2010). Nevertheless, the initial scholarly article regarding the notion of the Business Model might be attributed to Bellman et al. in 1957. In addition, it is worth noting that the phrase "Business Model" was prominently utilized for the first time in a title of a scholarly article on the research authored by Jones (1960) entitled "Educators, electrons and business models: A problem in synthesis." which was published in The Accounting Review.

The original definition of business model innovation was associated with the operational practice of system modeling inside the realm of information technology (Wirtz et al., 2016).

The concept has garnered considerable influence in recent years. Business models are crucial for understanding firm performance, as it provides a framework for how a company creates, delivers and captures value (Teece, 2010). Despite variations in definitions, researchers commonly analyze different components to assess business model effectiveness. For instance, profitability is highlighted as a key performance indicator by authors like Stewart and Zhao, 2000 or by Amit and Zott, 2001 (who also refer constructs as novelty, efficiency, complementarity and lock in to study business models).

Afuah and Tucci (2001) emphasize the importance of customer value, which reflects the firm's ability to meet and exceed customer expectations and refer a structure to offer value, in line with what later is defined by Osterwalder (2004) who introduces a comprehensive approach with the Business Model Canvas, detailing nine building blocks: value proposition, customer segments, channels, customer relationships, revenue streams, key resources, key activities, key partnerships and cost structure. These components collectively offer a holistic view of how a

business operates and competes in the market, underlining the multifaceted nature of business model analysis in explaining firm performance.

Author	Definition
Boulton and Libert, 2000	*"...new economy and applying what we learn, we present a new asset-based view of value creation, the basis for building new business models that leverage all of a company's assets to generate extraordinary value to all stakeholders"*
Stewart and Zhao, 2000	*"a statement of how a firm will make money and sustain its profit stream over time"*
Afuah and Tucci, 2001	*"A business model is about the value that a firm offers its customers, the segment of customers it targets to offer the value to, the scope of products/services it offers to which segment of customers, the profit site it chooses, its sources of revenue, the prices it puts the value offered its customers, the activities it must perform in offering that value, the capabilities these activities rest on, what a firm must do to sustain any advantages it has, and how well it can implement these elements of the business model"*
Chesbrough, 2002	*"The business model is thus conceived as a focusing device that mediates between technology development and economic value creation."*
Magretta, 2002	*"A good business model answers Peter Drucker's age-old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?"*
Osterwalder, 2004	*"business model is a representation of how a company buys and sells goods and services and earns money"*
Zott and Amit, 2010	*"way for general managers and entrepreneurs to create and appropriate value, especially in times of economic change." (....) "a system of activities that depicts the way a company "does business" with its customers, partners and vendors"*
Teece, 2010	*"describes the design or architecture of the value creation, delivery, and capture mechanisms it employs"*

Figure 2.2 - Some Common Definitions of Business Model Innovation
Source: Own creation

Within the domain of scholarly discussion, the notion of the business model has experienced significant development and examination in recent times (Wirtz et al., 2016; Sjödin et al., 2020), resulting in the establishment of diverse definitions for this idea.

Ghaziani and Ventresca (2005) propose that different conceptualizations of the term pertain to the modality through which an organization procures its financial resources. Zott and Amit (2008; 2010) propose that a structural template refers to a conceptual framework that outlines the manner in which a company interacts with its clients/customers, vendors and partners.

However, in the latest literature, there seems to be a growing convergence to Teece's definition and we will also embrace it along our research. According to Teece (2010), business

model is defined as the design and architecture that outlines how a company creates, delivers and captures value.

2.4 Business Model Innovation

2.4.1 Foundation Theory

In the 1990s, researchers in the disciplines of Strategy and Entrepreneurship initiated the construction and application of a comprehensive conceptual framework aimed at comprehending the diverse business processes within firms and their interrelationships in the creation of value (Teece, 2010; Zott et al., 2011).

However, the lack of a specific framework for business models in the field of Economics leads to a scarcity of well-defined theoretical underpinnings for business model innovation. Teece (2010) argues that the little consideration of this component in Economic theory can be ascribed to the dominant belief that any challenges are resolved either through or within the market, with business models emerging as an internal mechanism to address these difficulties within the organization.

In 2004, Osterwalder proposed a Business Model Ontology, which provides a comprehensive explanation and representation of Business Models, thereby laying the foundation for numerous concepts and tools. The author of this piece of research provides a detailed explanation of the fundamental principles governing conceptual frameworks in the specified context. Osterwalder and Pigneur (2010) undertook a comprehensive examination of the evaluation process of established business models within organizations in their scholarly article titled "*Business Model Generator*" The authors addressed the importance of strengthening the robustness of these models in order to maintain their long-term success. Furthermore, the authors discussed the imperative for firms to actively anticipate and adapt to complex settings, underscoring the critical significance of establishing appropriate methods to effectively manage any future obstacles.

Recent research by Teece (2010) and Zott et al. (2011) have employed the Resource Based Theory (Barney, 1991) to examine the impact of business model innovation on the performance of firms. These studies highlight the significance of business model innovation as a key determinant in achieving success.

Foundation theory	Research work employing theory
Resource Based View	Ayala *et al.*, 2019
	Bocken and Snihur, 2020
	Carayannis *et al.*, 2015
	Chang and Matsumoto, 2022
	Da Silva and Trkman, 2014
	Fichman *et al.*, 2014
	Frankenberger and Stam, 2020
	Ghezzi and Cavallo, 2020
	Jones and Giordano, 2021
	Kim and Min, 2015
	Klein *et al.*, 2021
	Lopez *et al.*, 2019
	Lubik and Garnsey, 2016
	Massa *et al.*, 2017
	Moroz and Gamble, 2021
	Nobre and Morais-da-Silva, 2021
	Sanchez and Ricart, 2010
	Schindehutte *et al.*, 2008
	Schaarschmidt *et al.*, 2021
	Sternad and Modritscher, 2020
	Swatman *et al.*, 2006
	Teece, 2010
	Wu *et al.*, 2010
	Zott et al., 2011
Dynamic capabilities	Carayannis *et al.*, 2015
	De Silva *et al.*, 2021
	Desyllas and Sako, 2013
	Foss and Saebi, 2017
	Klein *et al.*, 2021
	Schindehutte *et al.*, 2008
	Schaarschmidt *et al.*, 2021

	Snihur and Zott, 2020
	Soluk *et al.*, 2021
	Vernay *et al.*, 2022
Strategy Network Theory	Bustinza *et al.*, 2019
	Climent and Haftor, 2021
	Fichman *et al.*, 2014
	Ghezzi and Cavallo, 2020
	Sanchez and Ricart, 2010
Transaction Costs Theory	Ayala *et al.*, 2019
	Bustinza *et al.*, 2019
	Climent and Haftor, 2021
	Ghezzi and Cavallo, 2020
	Moroz and Gamble, 2021
Schumpeterian Theory	Sanchez and Ricart, 2010
	Climent and Haftor, 2021
	Fichman *et al.*, 2014
	Foss and Saebi, 2017
	Moroz and Gamble, 2021
	Sanchez and Ricart, 2010
	Soluk *et al.*, 2021
Strategic Entrepreneurship Theory	Bock *et al.*, 2012
	Carayannis *et al.*, 2015
	Klein *et al.*, 2021
	Casadesus-Masanell and Zhu, 2013
Game Theory	Casadesus-Masanell and Zhu, 2013
	Unterfrauner *et al.*, 2019
Path-dependency Theory	Bohnsack *et al.*, 2021
	Moroz and Gamble, 2021
Structural Inertia Theory	Martignoni *et al.*, 2020
	Snihur and Zott, 2020

Figure 2.3 - Common Foundation Theories Supporting Business Model Innovation

Source: Own creation

Academic research on business model innovation has been undertaken by scholars since 2005, with a particular emphasis on its theoretical underpinnings in Strategic Management Theories such as Transaction Costs Theory, Resource Based View Theory, System Theory and Strategic Network Theory. According to the work of Foss and Saebi (2017), the notion of business model innovation pertains to deliberate and innovative alterations made to the core elements of a business model.

Scholars and experts in the domain of business model innovation are currently making advancements in their efforts to establish a shared understanding and agreement over the precise definitions of both business model and business model innovation. Although the theoretical underpinnings of these definitions remain ambiguous and fragmented, there seems to be a growing consensus on the significance of Strategy Theory (Chang and Matsumoto 2022; Ghezzi and Cavallo 2020), particularly in conjunction with Resource Based View Theory (Chang and Matsumoto 2022; Kim and Min 2015). This perspective highlights the importance of cultivating Dynamic Capabilities within the organizational context (Teece 2010). Business model innovation is considered to be founded upon a combination of many Strategic Management Theories, such as Transaction Cost Economics, Resource Based Views of the organization, System Theory and Strategic Network Theory (Amit and Zott 2012).

Penrose's (1959) seminal study explored a broader spectrum of a company's resources, going beyond the conventional emphasis on capital, labor and land. Barney (1991) and Barney and Clark (2007) assert that the Resource Based View theory argues that a firm's competitive advantage is dependent on the possession of resources that are unique, varied and not easily substitutable. This is well recognized as a strategic tool employed to attain a sustainable competitive advantage through the identification and utilization of a corporation's strategic resources. Resource Based View has been referenced and supported by 23 papers within the sample, including Bocken and Snihur (2020), DaSilva and Trkman (2014), Massa et al. (2017) and Zollo et al. (2013).

Dynamic capabilities can be defined as the ability of an organization to efficiently incorporate, enhance and adjust its internal competencies in order to effectively respond to shifts in the business environment. The facilitation of these competencies is enabled by the implementation of organizational processes and the utilization of managerial skills (Teece et al., 1997; Teece, 2007; Teece, 2010). A comprehensive collection of 61 scholarly articles have cited Dynamic Capabilities as the primary foundation or drivers for business model innovation

(Bock et al., 2012; Desyllas and Sako, 2013; Massa et al., 2017; Chang and Matsumoto, 2022; Pitelis, 2022; Teece, 2018). The notion of Dynamic Capabilities is often referenced as internal organizational strengths that enable the advancement of business model design (Teece, 2018). Bock et al. (2012) posit that further experts contend that the influence of Dynamic Capabilities extends to a firm's capacity to pursue strategic flexibility. In the context of the Resource Based View, the concept of Dynamic Capabilities pertains to the strategic process of restructuring an organization's internal processes and capabilities in order to achieve a competitive advantage (Teece et al., 1997).

The investigation of Dynamic Capabilities has spurred numerous scholars to explore its expression within entrepreneurial contexts, often witnessed in technical or digital firms (Bohnsack et al., 2014; Ernkvist, 2015; Scuotto et al., 2017). Furthermore, scholarly investigations have examined the issue inside the realm of startup enterprises (Chammassian and Sabatier, 2020; Sorescu, 2017; Ghezzi and Cavallo, 2020; Gupta and Bose, 2019). The firms under analysis are known for their substantial volatility, which enables them to advance through the implementation of innovative business models. This phenomenon is often discussed in relation to the Schumpeterian Innovation Theory, as proposed by Schumpeter in 1934 and in 1942.

The significance of inter-organizational linkages is underscored in Strategy Network Theory, as highlighted by Doz and Hamel (1998). These ties are employed to facilitate research on business model innovation. Doz and Hamel (1998) argue that business models go beyond the conventional framework of Strategic Network Theory by incorporating supplementary dimensions such as purpose, acceptance, fairness, coherence and feasibility (Zott and Amit, 2009).

The Transaction Cost Theory, which was first introduced by Williamson in 1979, may be traced back to its origins in the 1930s and witnessed a renewed interest in the 1980s. Business model innovation remains a topic of great importance within the field of research. According to this theoretical framework, it is proposed that the activities involving the exchange of goods, services, or resources by a company can be conceptualized as an expenditure incurred by the corporation. Different approaches to structuring transactions result in different costs (Coase, 1937). The diversity and inventiveness of business models are driven by the variability in cost structures experienced by organizations.

This study employed a thematic analysis and cyclical interpretative-oriented content analysis to discover second order themes. These themes encompassed the theories that were

previously mentioned, specifically the Resource Based View, Dynamic Capabilities and Strategy Network Theory.

2.5 Drivers of Business Model Innovation

Several exogenous environmental conditions, such as economic crises, changing client tastes, or technical breakthroughs, can potentially trigger the occurrence of business model innovation (Markides, 2006; Teece, 2018).

In order to adapt to the dynamic nature of the market, it is crucial for established firms to actively pursue business model innovation (Wu et al., 2010; Desyllas and Sako, 2013; Bohnsack et al., 2014; Snihur et al., 2018; Bocken and Snihur, 2020; Bohnsack et al., 2021; Chang and Matsumoto, 2022; Cozzolino and Verona, 2022; Kim and Min, 2015).

The business environment is characterized by hostility and uncertainty for new entrants in the market and startup enterprises (Chammassian and Sabatier 2020; Ghezzi and Cavallo 2020; Gupta and Bose 2019; Sorescu 2017), which underscores the importance of implementing business model innovation.

In his seminal work, Chesbrough (2010) undertakes a comprehensive analysis of the various obstacles that hinder the process of business model innovation. The author delineates two discrete classifications of impediments, specifically obstruction and perplexity. To overcome these obstacles, the author proposes the implementation of leadership changes, engagement in experimentation and the adoption of an effectuation approach.

Numerous academics have discovered further barriers. Teece (2018) has mentioned technological change as an example of a factor. Furthermore, Sosna et al. (2010) have identified economic recession as an additional important element. Moreover, Sanchez and Ricart (2010) have identified low-income marketplaces as an additional element that merits consideration.

The extant literature has ample empirical support for the proposition that customer preferences exert a significant influence on business model innovation. The scholarly community has recognized the impact of customer experience driven processes on business model innovation, as evidenced by the works of Franke and Hader (2014), Keiningham et al. (2020), Linde et al. (2021) and Visnjic et al. (2016). However, it is equally important to underscore the significance of early engagement (Santa-Maria et al., 2021), customer centricity (Schneckenberg et al., 2017) and customer co-creation (Angeli and Jaiswal, 2016; Cao, 2014; Clauss et al., 2019b; Da Silva et al., 2021; Herrera, 2016; Kohler, 2015; Schneckenberg et al., 2017; Sjödin et al., 2021).

When contemplating business model innovation, it is important to note that the analysis of the external environment is not the exclusive focal point. The literature explores a range of internal capacities that contribute to the facilitation of business model innovation. These capacities include internal capabilities (Denicolai et al., 2014), incumbent assets that can be both complementary and conflicting (Kim and Min, 2015), managerial choices such as timing and organizational mode (Kim and Min, 2015), agility (Clauss et al., 2019a; Ghezzi and Cavallo, 2020; Linde et al., 2021), entrepreneurial behavior (Ferreras-Mendez et al., 2021) and collaboration with customers (Sjödin et al., 2020). This previously mentioned drivers are widely recognized as important elements that foster the process of business model innovation.

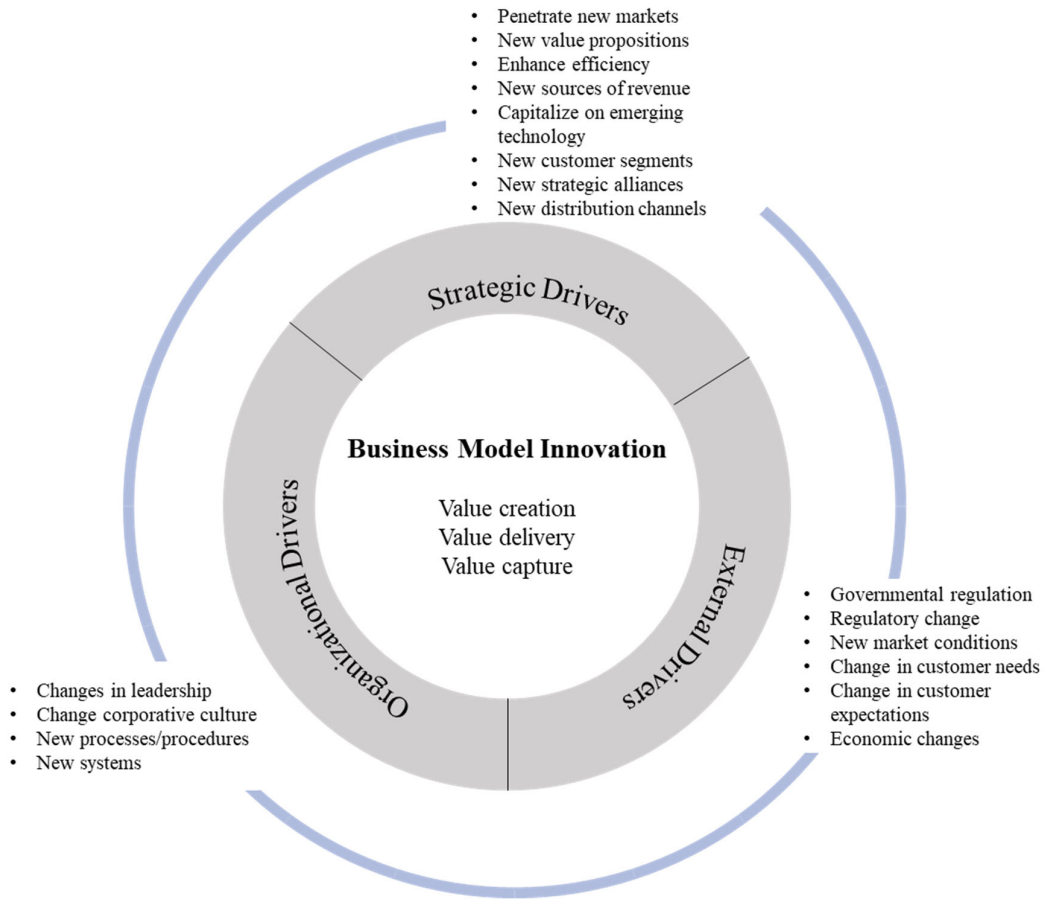

Figure 2.4 - Business Model Innovation Drivers

Source: Own creation

2.5.1 Strategic Drivers

The strategic drivers are widely referred in literature and include elements like the focus on improving operational efficiency, the desire to enter new markets or the opportunity to leverage on developing technologies.

The innovation of business model has been recognized as a strategic approach for organizations aiming to penetrate unfamiliar markets. The approach includes the development of new value propositions or the adoption of new revenue streams, as emphasized by Chesbrough (2010) or Amit and Zott (2020). According to Johnson et al. (2008), firms can effectively employ business model innovation to enter new markets by focusing on undeveloped markets or underserved client groups. Furthermore, the establishment of new or different distribution channels and the development of partnerships can also contribute to the expansion of market reach, as emphasized by Osterwalder et al. (2005), Ujwary-Gil and Potoczek (2020) and Bigelow and Barney (2021).

According to Zott and Amit (2010), the implementation of new business models can enable firms to expand their market presence by leveraging their current resources and competencies to develop new products and services. Considering the ever-changing nature of the corporate landscape, wherein enterprises are driven to improve their processes, minimize costs and adapt to changing customer needs, the quest for increased efficiency has emerged as a significant driver of business model innovation (Chesbrough, 2010; Foss and Saebi, 2017; Zhang et al., 2021). The corporations have the potential to enhance the allocation of resources and enhance operational procedures and processes with the aim of minimizing costs and fostering efficiency (Teece, 2010; Amit and Zott, 2020). The adoption of developing technologies has been recognized as a notable driver for the business model innovation (Chesbrough, 2010; Teece, 2010). According to Zott et al. (2011), the integration of developing technologies offers organizations the opportunity to create value. However, according to Foss and Saebi (2017), these technologies provide the capability to assist organizations in creating innovative value propositions or entering untapped markets.

2.5.2 Organizational Drivers

Organizational drivers encompass a range of factors, such as changes in leadership, adjustments to corporate culture and the implementation of novel procedures and systems (Kafetzopoulos, 2021; Oliveira-Dias et al., 2022). The adoption of new leadership has the potential to serve as a substantial catalyst for the emergence and advancement of new business models. The

importance of competent (or pro-active) leadership cannot be overstated in facilitating organizational adaptability and maintaining competitiveness in dynamic corporate landscapes.

This is achieved by using the individual abilities to offer new perspectives, build a forward-thinking vision and establish an environment that promotes the growth of innovative ideas (Kafetzopoulos, 2021; Zhao et al., 2019).

Foss and Saebi (2017) assert that leadership assumes a pivotal role in fostering the process of business model innovation. The empirical evidence suggests that changes in leadership have a substantial impact on the emergence of new business models. The significance of competent and innovative leadership in facilitating organizational adaptability and maintaining competitiveness within a dynamic corporate context cannot be overstated. This is achieved by offering new perspectives, fostering a forward-thinking mindset and creating a conducive climate that encourages creativity.

2.5.3 External Drivers

External drivers encompass a variety of factors, such as shifts in the economic landscape, changes in governmental laws and regulations and evolving consumer preferences and expectations. These characteristics are of considerable importance in driving organizations to engage in the exploration of new business models and the corporative involvement in innovation-related endeavors. This allows organizations to maintain their competitive edge in the ever-evolving contemporary business landscape.

Numerous scholars have observed the impact of market fluctuations on the innovation of business models (Gassmann et al., 2014; Chesbrough, 2010; Zott et al., 2011; Foss and Saebi, 2017; Teece, 2010; Zhang et al., 2021).

It is evident in previous research that organizations may face the need to adapt their business models in order to maintain their competitive advantage in the dynamic market circumstances, such as evolving consumer preferences or the emergence of new technologies. Gassmann et al. (2014) have underscored the potential ramifications of market disruptions on firms, hence underlining the imperative for enterprises to reassess their strategic approach. Similarly, Chesbrough (2010) has emphasized the need of adapting to evolving market conditions as a means of fostering business model innovation in response to new challenges faced by firms.

According to this previous research, the complex legal landscape that enterprises encounter when seeking external information and resources may be substantially impacted by government

constraints, hence influencing the business models employed for open innovation. Business organizations strive to adjust to evolving regulatory requirements and comply with ever-changing standards. In the present situation, legislative regulations have the ability to foster the advancement of business model innovation. Zott and Amit (2010) highlight the need of integrating regulatory considerations into the development of innovative business models, particularly in areas that are subject to significant regulatory oversight, such as healthcare and telecommunications.

Legislative reforms possess the capacity to foster innovation and offer new opportunities inside the market. However, it is important to note that legal rules can also impose limitations on companies, so limiting their capacity to engage in experimental business strategies or disturb the current status quo. Amit and Zott (2012) assert that business model innovation can be influenced by government regulations, which can present both obstacles and favorable conditions. Even in highly regulated industries, organizations are compelled to navigate complex regulatory environments in order to formulate innovative value propositions and produce supplementary revenue streams.

2.6 Motivators of Business Model Innovation

A driver and a motivator, though often used interchangeably, have distinct meanings in the context of business and innovation.

A driver refers to "*a planned effort to achieve something*" (Miller and Brown, 2013). In business, drivers are often an intention and planned action. For example, strategies to penetrate new markets, new value propositions, strategy to enhance efficiency, changes in leadership or cultural change.

As per the Cambridge Dictionary, *motivator* is defined as "*the willingness to do something, or something that causes willingness*". A motivator is a factor that influences an individual's or organization's willingness to act. Motivators are more subjective and pertain to the psychological or emotional aspects that encourage individuals or groups to pursue certain actions. In the context of business model innovation, motivators might include the desire for growth, the aspiration to lead the market, the need to solve a specific problem, or the aim to achieve sustainability goals. Motivators are closely linked to the intrinsic or extrinsic incentives that lead individuals within the organization to embrace and implement change (Miller and Brown, 2013).

In summary, while drivers are the internal plans that forces that necessitate change, motivators are the internal impulses that inspire and propel individuals or organizations to respond to these forces. Recognizing the distinction between the two helps in crafting strategies that not only address the fundamental needs for innovation but also align with the internal motivations of the stakeholders involved.

2.6.1 Sustainability as Motivator

Although the growing importance of sustainable business models in literature (Geissdoerfer et al., 2018, Bocken et al., 2013; Bocken and Geradts, 2020 Bohnsack et al, 2014; Evans et al, 2017) sustainability is rarely identified as a substantial reason in motivating business model innovation, as it fosters firms to reevaluate and adapt their strategy to align with environmental, social and economic considerations.

Given the worldwide apprehension over climate change, limited resources, social inequality and other pressing issues, businesses are increasingly recognizing that only prioritizing financial profits is no more viable or morally justifiable. Integrating sustainability as a core driver for business model innovation offers many strong justifications for firms to implement transformational actions.

The growing recognition of sustainability has garnered interest from many stakeholders, including investors, workers, customers and others (Carrasco-Ferré et al., 2022; Best et al., 2021; Evans et al., 2017; Velter et al., 2020). Corporations are quicker to embrace environmental and social sustainability objectives in recognition and expectation of this.

Worldwide, corporations are becoming aware of sustainability concerns as a result of more stringent regulatory enforcement (Schaltegger et al., 2016; Geissdoerfer et al., 2022). In response to this, several firms are implementing innovative changes to their business models.

Consequently, customers' apprehensions about sustainability are increasing. Emphasizing sustainability in the innovation of business models may facilitate the exploration of untapped markets, appeal to a broader audience and establish a distinct brand identity (Todeschini et al., 2020; Bocken et al., 2013).

An essential element in developing the business model is the commitment to achieving resource efficiency (Whalen, 2019; Bocken et al., 2014). The search of more sustainable solutions is driven by the need for greater efficiency, which involves using resources more economically. This, in turn, may lead to the creation of innovative business models. Businesses that proactively address sustainability issues tend to exhibit greater resilience and

adaptability to market dynamics and emerging challenges, leading to long-term resilience (Liu et al., 2021; Dentoni et al., 2021). Moreover, employees often have a significant influence on the process (Kossyva et al., 2023; Piscicelli et al., 2018). Environmental concerns often lead to increased levels of "brand awareness," prompting firms to adapt their business models in order to tackle these social and environmental challenges.

Generally, the implementation of a sustainability-focused business model innovation represents a strategy shift towards a more mindful and future-oriented approach. Businesses may ensure their long-term development and relevance in a constantly evolving global setting by considering the wider consequences of their activities and actively promoting good change.

2.6.2 Risk Management as Motivator

Risk management as a motivator of business model innovation is seldom referred in literature. It encourages firms to proactively adapt and improve their strategies to successfully overcome uncertainties and hazards. We can find references in literature for firms to embrace business model innovation to manage risk.

Researchers such as Helfat and Raubitschek (2018), Bolton and Hannon (2016), Hock-Doepgen et al. (2021), Casadesus-Masanell and Zhu (2013), Zott and Amit (2008), Desyllas and Sako (2013) have shown that risk management plays a crucial role in fostering business model innovation. While the full extent of its effect has not been extensively studied, these studies indicate that it has a significant influence. This is particularly important since organizations working in dynamic and unstable settings are primarily concerned with managing risk. Furthermore, there is a strategic goal to prevent, reduce and transfer risk. Researchers have shown that the effective management of risk may be accomplished by using business model innovation. Bolton and Hannon (2016) and Helfat and Raubitschek (2018) provide valuable insights into how firms strategically develop their business models to proactively detect and evaluate potential risks in early stages. Corporations may proactively detect potential risks by conducting an analysis of their internal and external surroundings, which includes factors such as emerging technologies, market volatility and regulatory changes. Businesses may mitigate or avoid these risks and capitalize on external developments by adopting a proactive approach.

Hock-Doepgen et al., 2021 and Casadesus-Masanell and Zhu, 2013 argue that adopting a risk-averse approach may enhance an organization's resilience and adaptability by promoting innovation in its business model and the early detection of possible dangers.

Cultural changes that drive innovation in business models and promote concerns about risk management throughout the whole organization, at various levels of hierarchy (Zott and Amit, 2008; Desyllas and Sako, 2013), hence increasing awareness of potential dangers and creating value. Furthermore, Autio et al. (2014) and Bocken and Geradts (2020) contend that risk management is crucial for ensuring optimal efficiency in the exploitation of resources. Incorporating risk management into business model enhances decision-making and empowers organizations to make comprehensive strategic decisions, as stated by Bocken and Geradts (2020) and Helfat and Raubitschek (2018).

According to the research conducted by Casadesus Masanell and Zhu (2013), as well as Zott and Amit (2008), stakeholders, including customers, partners and investors, consider organizations that use a systematic approach to risk management to be very valuable. Adopting such a strategy is thought to enhance a company's capacity to efficiently manage uncertainty and create value. Strategically incorporating risk management into business model innovation may enable organizations to gain a competitive advantage. This entails identifying and mitigating overlooked risks and issues, strategically positioning organizations within the market and improving overall efficiency (Zott and Amit, 2008; Almeida Costa and Zemsky, 2021). Overall, there is a widespread belief that risk management is essential for promoting resilience, flexibility and strategic decision-making, hence encouraging the creation of creative business models. In a changing business environment, companies may achieve long-term development and improve their ability to compete by effectively managing risks and taking a proactive approach to deal with unpredictability.

2.7 Agile and Lean principles

2.7.1 Agile Principles

Qumer and Henderson-Sellers (2006) define agility as the capacity to effectively accommodate and adapt to changes in a dynamic environment. Agility is using past knowledge while gaining insights from present experiences to produce top-notch goods or services under limited financial limitations and tight deadlines (Jyothi and Rao, 2012). Agility covers the qualities of flexibility, speed, adaptability and efficiency (Campanelli and Parreiras, 2015; Conboy and Fitzgerald, 2004).

There is a discussion in business research over the extent to which agile approaches may be used. Agile methodology is effective in managing complex issues that can be divided into

separate modules, allowing for iterative processes and seeing failures as opportunities for learning rather than something to be completely avoided (Rigby et al., 2016). Products that are complex and have limited ability to be broken down into separate modules may need the use of a “Stage-Gate”, plan-based approach or a combination of agile and “Stage-Gate” methodologies, as proposed by Cooper and Sommer (2016). This statement raises another issue and highlights a gap in the existing literature on the appropriateness of agile methods for validating and creating an entire business model centered around a product, service, or value proposition.

Agile methodologies are linked to a philosophy that emphasizes four primary objectives and principles: (i) prioritizing "*individuals and interaction*"; (ii) embracing "*piloting*"; (iii) fostering "*customer collaboration*"; and (iv) adapting to "*respond to change*" (Campanelli and Parreiras, 2015).

2.7.2 Lean Principles

The emergence of lean principles may be attributed to the increasing demands of consumers and the more varied and intense offerings from rivals (Hines et al., 2004; Womack and Jones, 1997; Ries, 2011). The shift in corporate emphasis towards customer value is embodied in the 5 lean principles:

1. *Create value for the customer.* Value is generated by the reduction of internal waste, resulting in cost reduction. Additionally, value is enhanced by providing new services and/or functions that are highly appreciated by the client.

2. *Identify the value stream.* The idea of value stream should not be obscured. It is necessary for every company to ensure that the expenses are easily understood and visible to all participants in the supply chain.

3 *Create flow.* The notion of producing flow aims to eliminate any interruptions in the value stream by addressing the key sources of such interruptions, such as production changes, breakdowns, wrong batch quantities or scheduling, absence of critical information and re-entrant loops.

4. *Produce only pulled by the consumer.* This idea entails achieving optimal responsiveness in the production of high-quality goods with efficiency and value. The manufacturing pull extends upstream to the suppliers and the whole upstream supply chain.

5. *Strive for excellence* by consistently identifying and deleting any unnecessary or inefficient elements.

2.7.3 Leagile Principles

Existing research in the manufacturing field suggests a hybrid approach called "leagile" that combines agile and lean philosophies. This approach has been discussed in studies by Naylor et al. (1999), Mason-Jones et al. (2000) and Agarwal et al. (2006). However, these studies do not address Lean Startup Approaches (Ries, 2011) possibly due to the limited and inconsistent application of these principles in the areas of strategy, entrepreneurship and innovation. In addition, the connection between the iterative process applied to the components of a business model and the mechanisms outlined in Lean Startup Approaches in relation to business model innovation is rarely acknowledged in the fragmented literature on business model innovation. This literature still faces issues related to paradigms, as highlighted by Foss and Saebi (2018) and Zott et al. (2011). The abundance of diverse methodologies that potentially aid managers in their innovation pursuits, coupled with the significant absence of a coherent and consolidated theoretical framework supporting these methodologies, collectively contribute to the creation of a complex environment that exacerbates the challenges already faced by corporations, thereby jeopardizing their ability to survive.

[This page is deliberately left blank]

Chapter 3: Methodology

In Agribusiness sector, characterized by its complexity, the exploration of new business models is perceived as an important strategy. This chapter clarifies the systematic methodological process that allowed and supported this research.

Previously, we followed a systematic literature review providing a comprehensive account of the theoretical foundation into of business model innovation, its drivers and motivators and understand what previous literature have found about how and why corporations innovate their business models.

After conducting a comprehensive literature review, this research proceeded along applying a theoretical framework put forward by Ghezzi and Cavallo (2020). This study analyzed business model innovation on technological startups in complex and dynamic environments. The objective of our research is to examine the utilization of business model innovation by agribusiness firms to attain sustained success in the long run.

Our research utilizes the theoretical framework proposed by Ghezzi and Cavallo (2020) and employs a multi-case study methodology to illustrate the practical implementation of the concept. The agribusiness is currently a critical and interesting field of research, as it faces complex challenges arising from evolving consumer preferences, environmental sustainability considerations and dynamic market forces. In order to gain a thorough understanding of the strategies and adaptations employed by agribusinesses in a complex and diverse environment, our research utilizes a rigorous and systematic methodology.

The goal is to examine how organizations in the agribusiness industry utilize business models innovation to achieve long-lasting success in the fast-changing modern business landscape in more or less dynamic environments and playing a more or less active role.

3.1 Epistemological Orientation

The rationale for employing a case study approach, characterized by qualitative analysis, is frequently supported by the alignment between the research inquiries and the epistemological orientation of the investigation. In the present scenario, wherein the objective is to investigate and elucidate rather than make broad generalizations and when a constructivist epistemological perspective is preferred over a positivist one, the utilization of case studies emerges as a persuasive methodological decision (Eisehnart,1989; Braun and Clarke, 2006; Yin, 1984; Mason, 2017).

This study involves both exploratory and explanatory approaches to investigate business model innovation in the agribusiness sector.

It explores and enhances the established framework to improve the understanding of business model innovation in the changing agribusiness sector. This exploratory approach intends to understand the field of research. The agribusiness sector requires an examination of new areas within the business model innovation landscape due to its distinct problems and potential. The research aims to discover characteristics that were not expressly included in the original framework but are essential in the context of agribusiness.

Our study examines undiscovered variables to investigate how sector-specific drivers impact business model innovation in agribusiness, exploring how agribusiness companies either support or hinder the effective execution of new business models and which fresh theoretical views can be used to understand the unique characteristics of business model innovation in this evolving industry. The study's exploratory nature goes beyond the current framework to discover new insights and expand our understanding. The research aims to offer a comprehensive and detailed roadmap for agribusiness companies exploring business model innovation by incorporating (maybe sector-specific) factors within the framework.

This research demonstrates a mutually beneficial relationship between the exploratory but also explanatory aspects (Cornelissen, 2017), providing a dual perspective that clarifies the Ghezzi and Cavallo framework and advances it into new areas, ensuring its importance and effectiveness in the complex field of agribusiness. It uses an explanatory approach to understand and propose causes and explanations to the complexities of the field and industry within this framework. The study intends to further analyze the components, connections and processes suggested in the existing framework. This explanation is based on understanding the inherent complexity of business model innovation and recognizing the value of current frameworks as helpful guides. The goal is not just to use the framework but to thoroughly elucidate its components, confirm its importance in the agribusiness setting and identify the contextual issues that could impact its implementation.

The study examines the Ghezzi and Cavallo framework to determine its applicability to a variety of agribusiness firms - what changes or adjustments are needed to match the unique characteristics of the agribusiness industry; the research refines the framework to enhance its practical usefulness, offering stakeholders a clearer guide for utilizing business model innovation in agribusiness.

The purpose of the following section is to provide a justification for the use and adjustment of Ghezzi and Cavallo's (2020) model as the methodological framework for our research in the agribusiness. The methodical aspect of the framework is well-suited to the complex nature of business model innovation in agribusiness sector (check chapter *1.3 Why Agribusiness*), therefore making it an appropriate foundation for our research.

3.2 The Framework

The authors of the study titled "Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches" (Ghezzi and Cavallo, 2020) investigate the utilization of Lean Startup methodologies to facilitate agile business model innovation within the domain of digital entrepreneurship. This article explores the importance of rapid adaptability and creativity within the fast-paced and ever-changing digital environment.

The study highlights the rapid rate at which technology advancements are occurring and the subsequent effects on conventional business models. This highlights the imperative for firms to engage in ongoing innovation in order to maintain competitiveness and address changing client needs. The Lean Startup methodology, conceptualized by Eric Ries (2011), forms the basis for their examination, placing emphasis on key principles including iterative product development, validated learning and a build-measure-learn feedback loop.

The authors place significant emphasis on the utilization of Minimal Viable Products as a mean to test hypotheses and mitigate resource inefficiencies. This methodology empowers entrepreneurs to efficiently adjust and reorient their business models as they acquire knowledge from practical engagements with clients. Ghezzi and Cavallo provide empirical evidence and practical illustrations to demonstrate the effective implementation of Lean Startup concepts in driving business model innovation among digital entrepreneurs.

Furthermore, this study examines the difficulties linked to the adoption of Lean Startup methodologies in well-established institutions - incumbent corporations - (which we argue in our research), highlighting the imperative of fostering a cultural transformation that promotes experimentation and a willingness to take risks. Additionally, the paper examines the significance of technology, data analytics and customer feedback in facilitating the implementation of Lean Startup principles.

The authors conclude their study by emphasizing the potential of Lean Startup approaches in facilitating agile business model innovation, with a specific focus on its applicability within the realm of digital entrepreneurship. The importance of adopting a culture centered around

experimentation and iterative development is emphasized as a critical factor in effectively adjusting to the rapidly evolving digital environment. This paper provides significant insights for researchers and practitioners who are interested in addressing the issues associated with business model innovation in the digital era.

Ghezzi and Cavallo's study offers a thorough analysis of the application of Lean Startup methodologies to bolster agility and stimulate business model innovation within the domain of digital entrepreneurship. The significance of iterative development, minimum viable products (MVPs) and fostering a culture of experimentation is underscored in addressing the difficulties presented by swiftly developing markets and technologies.

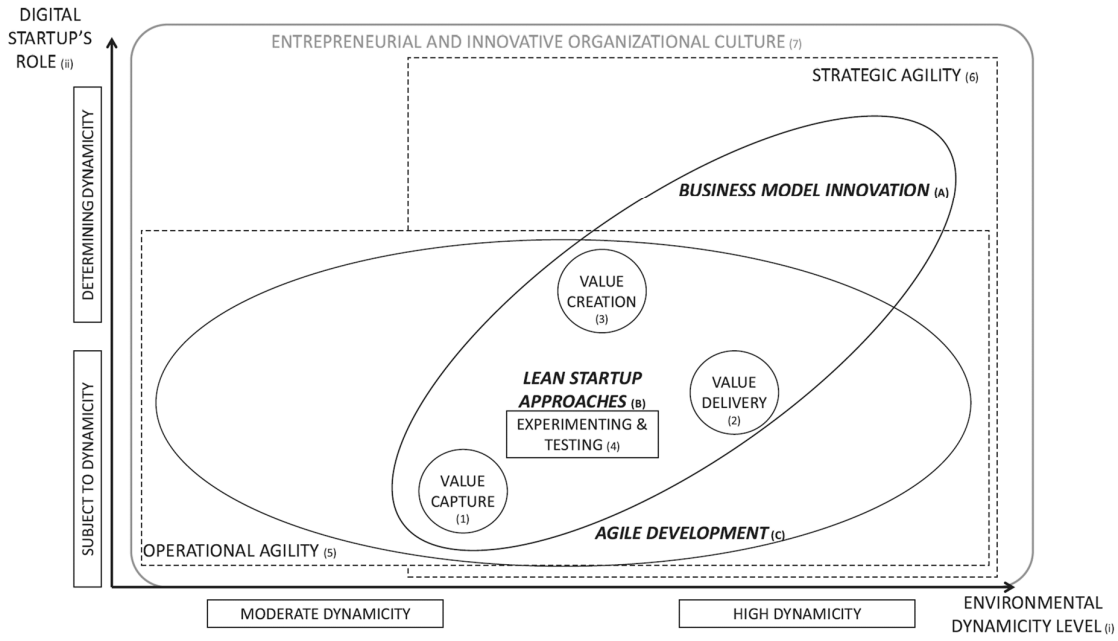

Figure 3.1 - Ghezzi and Cavallo Framework

Source: Ghezzi and Cavallo, 2020

The theoretical framework proposed by Ghezzi and Cavallo examines two axis: the degree of dynamism in the environment and the dynamic role of the organization:

1) The environmental dynamicity level (Eisenhardt and Martin, 2000; Sirmon et al., 2007; Alvarez et al., 2018; Bannet and Lemoine, 2014) refers to the degree of fluctuation, instability and disruption in the external environment in which a corporation operates. This statement highlights the velocity and uncertainty associated with shifts in technical advancements, market dynamics and regulatory landscapes. This axis quantifies the degree of activity in the

surrounding environment that has an impact on a company's operations and strategy. High environmental dynamicity refers to a rapidly changing and unpredictable external environment, in which organizations must promptly adjust to frequent and unplanned changes. In contrast, a low level of environmental dynamicity indicates a stable and predictable environment, characterized by gradual and predictable changes.

2) The dynamic role of a corporation pertains to the degree to which a corporation actively and substantially engages in the process of reforming or reorganizing its industry. Teece et al. (1997, p. 516) defined dynamic capability of the firm "as the firm's ability to integrate, build and reconfigure internal and external competencies to address and possibly shape rapidly changing business environments". A corporation assumes an internal dynamic capability (Eisenhardt and Martin, 2000) by instigating substantial modifications that amplify the unpredictability and uncertainty inside its industry. When a corporation proactively modifies its business model, operational processes, or market strategy, it takes on a dynamic role. This active engagement becomes particularly evident when the company's advancements lead to disruptions in the industry or market. For instance, a corporation with a dynamic role may bring cutting-edge technology or business methods that challenge conventional industry norms, so establishing novel standards and expectations. In contrast, a low dynamic role implies that the company is more inclined to adhere to current industry circumstances and respond to changes rather than instigate them. These companies usually respond to external developments by making little tweaks rather than initiating major transformations.

To summarize, Ghezzi and Cavallo's approach utilizes these two dimensions to classify and examine how organizations navigate and exert influence on their surroundings. The degree of environmental dynamicity evaluates the extent to which external changes affect the corporation, whereas the dynamic role of the firm investigates the organization's proactive involvement in transforming its industry. These axes provide a thorough comprehension of the interaction between external factors and internal tactics in propelling business model creation.

3.3 Case Selection

Potential case studies were identified through desk research. The corporation was the unit of analysis.

Case studies in agribusiness is a particularly interesting field to study business model innovation because the industry is often characterized by a high level of complexity and a wide range of interrelated factors. Agribusiness companies are subject to a variety and very

heterogeneous external pressures, including changing market conditions, environmental factors and regulatory changes, as well as internal pressures such as the need to optimize production processes and increase efficiencies. Furthermore, agribusiness firms are often involved in complex supply chains that require close coordination with other actors, including suppliers, distributors and retailers. Simultaneously, we can identify also very heterogeneous corporations, operating in the same, or distinct markets: with more dynamic or more moderate roles and in more dynamic or more stable markets.

Acknowledging the limitations associated with conducting case studies, including challenges related to generalizability, subjectivity, external validity, resource requirements and limited scope (Eisenhardt, 1989), the decision was made to employ a multi-case methodology to enrich the data analyzed and collected. It was chosen due to its ability to facilitate a comprehensive investigation, hence enabling a nuanced and rich comprehension of the phenomenon. The employed methodology facilitated the acquisition of meticulous and all-encompassing data, thereby affording a thorough perspective on the problem. These cases had the potential to provide valuable contributions to the advancement of how and why corporations in agroindustry innovate their business model innovation By offering comprehensive and complex data, the methodology allows the opportunity to either corroborate or question existing literature.

To perform a thorough analysis of the elements to explore the framework and analyze business model innovation, we opted for a theoretical selection approach rather than relying on statistical approach (Glaser and Strauss, 1967; Pettigrew, 1988; Corbin and Strauss, 1990).

The criteria for selecting cases includes two main factors: diversity and relevance. The diversity criterion aims to encompass a wide range of agribusiness subsectors (fruit, fresh vegetables, ornamental plants, lawn), supply chain complexity, technological advancement levels, geographical locations and business models in order to facilitate a comprehensive examination. On the other hand, the relevance criterion focuses on identifying cases that demonstrate notable examples of business model innovation, as these cases are particularly valuable for analysis. The purpose of selecting 4 case studies is to provide an explanation and exploration of the Ghezzi and Cavallo framework and to address comprehensively the two key axes combination (2x2): the level of environmental dynamicity and the corporate role in managing this dynamicity:

- *Environmental dynamicity level* pertains to the extent of variability, instability and upheaval in the external environment where a company functions. It indicates the speed and

unpredictability of changes in technical breakthroughs, market situations and regulatory environments. It measures the level of activity in the environment that affects a company's operations and strategies. High environmental dynamicity denotes a fast-changing and unpredictable external environment, whereas low dynamicity reflects a stable and predictable environment.

- *Dynamic Role of the Firm* refers to the extent to which a company actively and significantly participates in transforming or restructuring its industry. A firm takes on a dynamic role by initiating significant changes that increase the volatility and instability within its industry. When a company actively changes its business model, operational procedures, or market strategy, it assumes a dynamic role. This active participation becomes especially noticeable when the firm's developments result in disturbances within the industry or market. A low dynamic role suggests that the firm is more likely to conform to industry conditions and adapt to changes rather than initiate them.

The relationship between these concepts is noticeable in situations where a high level of environmental dynamism aligns with a dynamic role taken on by the company. Alignment arises when a company's business model innovations cause disruptive developments in the industry or market. In these cases, the company acts as a catalyst for instability and unpredictability, actively influencing the external surroundings. On the other hand, a low dynamic role could be linked to a steady industry environment in which the company adjusts to current conditions without causing major disruptions.

The level of environmental dynamicity and the firm's dynamic role are interconnected concepts that reflect external turbulence and the firm's proactive involvement in shaping industry dynamics. This offers a detailed insight into how firms adapt and influence the constantly evolving business environment.

Figure 3.2 - Framework Design

Source: Own creation

Vitacress study focuses on the operations and performance of a dynamic corporation within a moderate environmental context. In this context, firms have internal dynamicity while operating under relatively stable external surroundings. The drivers of innovation within this particular setting were shaped by internal dynamics within the firm, including factors such as leadership and organizational culture.

The case selected for the purpose of exploring dynamic corporation in a dynamic environment is the Driscoll's case study. This scenario entailed firms that were proactively modifying their business models in reaction to swift transformations occurring within their industry or market. The impetus behind innovation in this particular context was influenced by the drivers' imperative for ongoing adaptation to customer demands and the pursuit of competitive advantage.

The SP&F case study was selected as a mean to investigate the operations of moderate dynamic corporation within a moderate environment. In this particular context, corporations shown a tendency towards more cautious and traditional business models, operating within generally stable surroundings. In this particular setting, the drivers of innovation were commonly characterized by a lesser sense of urgency and a greater emphasis on responding to the market and enhancing operational efficiency.

In order to examine the operations of moderate dynamic corporation within a dynamic environment, our research focused on an in-depth analysis of Camposol and specifically in redirecting productive focus to lawn production. In the given context, corporations work within dynamic and intensely competitive contexts, while their internal processes and tactics exhibited

a more conservative and moderate approach. The impetus for innovation in this context is frequently originated from external forces and the imperative to maintain competitiveness.

The subsequent sections in this chapter will provide a more comprehensive examination of the procedures involved in data collection and analysis, with a focus on extracting meaningful insights from the case studies.

3.4 Data Collection

Following multi-case study methodology (Ozcan et al., 2017; Yin, 2018), a diverse range of data sources was utilized to get comprehensive and detailed insights. These diverse data sources played a crucial role in facilitating the formulation of empirical theory based on data collected from the field. In order to investigate and uncover novel information, we implemented a series of data gathering phases, progressively enhancing our comprehension of the data and developing theory based on initial insights and interpretations (Strauss and Corbin, 1998; Yin, 1984).

After carefully selecting cases, the research design focused on a thorough and comprehensive data collection approach to guarantee the reliability and validity of the information gathered from each case study. This methodology used triangulation (Patton, 1999; Denzin, 1978) by combining various data sources to validate and strengthen the reliability of the results (Strauss and Corbin, 1998).

Data triangulation involved the utilization of various data sources to confirm and support research results, therefore enhancing the overall credibility of the study (Denzin, 1978). A triangulation technique was used for each chosen case, involving field visits, semi-structured interviews and archive materials.

Field visits were done to physically explore the operational context of each agribusiness enterprise. The on-site observations offered direct insights into the daily operations, corporate culture, leadership styles and contextual nuances that may not be fully captured by other data sources. Simultaneously, it allowed corroborate some results and findings driven from semi-structured interviews and archival data.

The interviews were conducted with key stakeholders in each firm. The interviews, conducted in a semi-structured approach, facilitated an in-depth examination of viewpoints, experiences and ideas regarding business model innovation in agribusiness, allowing comparison and pattern analysis.

The semi-structured interviews conducted as part of this research were methodically designed to ensure a comprehensive exploration of key constructs related to business model innovation in agribusiness. The interviews script (Appendix A: Interviews script) served as a structured yet flexible guide, facilitating in-depth conversations with key stakeholders of each organization. The interview script was routed on constructs that had been examined and validated in previous research. The initial design was inspired by the framework developed by Ghezzi and Cavallo (2020) for studying business model innovation and adapted to the current study (eg. the scope of multi-sided platforms digital startups to scope of agribusiness corporations). This guaranteed that the interviews were in line with known concepts and theories, thereby aiding in the ongoing research in this field. Additional elements from Zott and Amit's (2010) work were integrated into the interview script to expand its depth and breadth, with a particular emphasis on the objectives related to innovating business models. The interview script incorporated constructs pertaining to the content, structure and governance of business models, as suggested by Zott and Amit. This enhancement facilitated a detailed analysis of the strategic factors affecting changes in business models in agribusiness firms. We included elements from Zott and Amit's research to encompass a wider range of characteristics that impact business model innovation. This viewpoint offered valuable insights into the strategic objectives driving innovations in business models and complemented the operational factors discussed by Ghezzi and Cavallo. The integrative approach aimed to comprehensively examine both the practical and strategic aspects of business model innovation in the agribusiness sector.

The script was based on existing constructs, but the semi-structured interviews provided flexibility and adaptability during conversations. Using this method allowed interviewees to share distinctive perspectives and firsthand encounters that went beyond the established frameworks, promoting a thorough and situation-specific investigation of business model innovation inside each agribusiness case. By building the interview script on tested constructs from literature and enriching it with insights from diverse frameworks, the research ensured a robust and theoretically grounded exploration. This methodology ensures that the interviews are in line with known ideas and can adapt to the changing corporate environment.

The interview protocol was followed: all participants were informed about the objective of the study and provided with the chance to provide their consent, so ensuring adherence to ethical principles.

The outcome is a detailed and subtle comprehension of business model innovation in agribusiness, encompassing both the fundamental aspects from previous studies and the innovative additions from the combined constructs.

We intended to obtain a satisfactory number of interviews in each case study in order to collect different perspectives from different stakeholders (even for triangulation of data). The number of interviews for each case study was decided by reaching saturation, following Strauss and Corbin's (1998) standards, the point at which further interviews no longer provided new information or insights. The researchers conducted interviews with stakeholders in each case study until interview saturation was reached, when no new topics or information emerged and category saturation was achieved, where no new categories or dimensions of analysis emerged. To gain a comprehensive understanding of the companies' business models we identified recurring themes and patterns within the dataset.

Archival records (historical and contemporary records) were reviewed and offered insights into the organization's history and the development of its business model (internal reports, e-mails, news, videos, corporative websites) pertaining to each agribusiness organization. This method of data collection surpasses simple quantitative factors, focusing on the thoroughness and complexity of information obtained from many sources. For a sub-set of archival records, pattern analysis was conducted to complement interview analysis.

The research attempted to enhance the reliability and validity of the study by including field visits, interviews and historical materials to provide a comprehensive and detailed understanding of each case. Triangulation, driven by saturation criteria, enhances the trustworthiness of findings and contributes to the rigor of a multi-case research.

3.4.1 Vitacress Case Study

In order to carry out this case study, a qualitative research methodology was utilized, incorporating various means of data gathering. The data collection was conducted over a period of 10 months, spanning from June 2022 to March 2023. The data was collected through a combination of fieldwork, archival research and interviews. In order to gather data, our primary method of inquiry involved conducting qualitative interviews, as outlined by Kvale and Brinkmann (2009). Through the utilization of this methodology, we successfully acquired a substantial and comprehensive dataset suitable for thorough examination. A comprehensive series of interviews was undertaken (totaling 26 hours recording) with relevant stakeholders. These interviews included 2 sessions with the Chief Executive Officer, 1 session with the

Marketing Director, 2 sessions with the New Products Director, 1 session with the Production Responsible and 4 sessions with corporative clients. The interviews duration was between 1h50 and 3h55. The interviews were done either in-person or via the Zoom platform and subsequently transcribed for the purpose of analysis. A collection of over 20 company papers, encompassing both internal and external sources, was assembled. These documents include product listings, company presentations (including a comprehensive internal report dated from June 2022), annual reports for the firm spanning from 2005 to 2022, as well as annual reports for the RAR group covering the years 2019 to 2022. Additionally, relevant files such as emails were also included in this compilation. To gain insights, an in-depth analysis was conducted on these documents. In order to enhance our comprehension of the company's operational and manufacturing processes, we made an on-site visit to the company's warehouse and factory facilities. This visit facilitated a comprehensive understanding of the business's operations and innovative technologies employed, as leadership and corporative culture.

3.4.2 Driscoll's Case Study

For Driscoll's case study, we also employed a varied research methodology that included field visits, in-depth interviews and the analysis of archival records. The main objective was to get a comprehensive comprehension of Driscoll's and its affiliated companies, supported by perspectives from important stakeholders. The study aimed to elucidate the complexities of the organization by combining direct observations, interviews with top-level executives and a thorough examination of archive materials.

The field visit was an essential element of our study plan. Being physically present in the organizational context provided the opportunity to directly observe the company's activities, corporate culture and overall working dynamics. We sought to gain a comprehensive understanding of the company's day-to-day operations and core values by visiting the facilities and interacting with the staff.

In addition to our qualitative findings from field visit, we conducted 12 interviews between May 2022 and February 2024 with key staff, assuring a comprehensive range of opinions. The average duration of each interview was 2h22. The interviews encompassed conversations with the Driscoll's managing director, a former managing director, a financial director from EMEA, an operations director from Driscoll's Portugal, 2 productors association directors and partner-farmers. All interviews followed a semi-structured interview script, nevertheless, every interview was customized to distinct perspectives on strategic decision-making, financial

administration, operational complexities and the historical progression of the enterprises in question.

Archival records were crucial in our methodological approach, alongside interviews and field observations. An exhaustive examination of various documents, including internal documents, annual reports, emails and websites from Driscoll's, Driscoll's Portugal, Berry.net, RAC - Reiter Affiliated Companies and other relevant sources, yielded a comprehensive understanding of the historical and contextual background. These records were valuable sources that provided insight into the history of the companies, strategic changes and the overall industry landscape.

Our methodological approach intended to achieve a thorough and detailed understanding of the case by gathering information from field visits, interviews and research of historical documents through triangulation. Triangulation not only increases the accuracy and dependability of our results, but also enables a more comprehensive examination of the complexities present in the agribusiness environment.

3.4.3 SP&F Case Study

SP&F case study used a systematic methodology to gain a deep grasp of the company's operations and difficulties on innovating its business model. The approach included a field visit to the corporation's facilities, enabling to fully engage in the organizational culture and directly observe the daily operations and gain an explorative understanding of how decisions are made and strategy is defined.

Nine interviews to internal stakeholders were carried out from November 2022 to March 2024 to collect insights from different viewpoints within the organization including the Partner and CEO and with the Administrative Partner. Additionally to internal stakeholders interviews, we conducted 6 external interviews included stakeholders like Producers Associations, partner growers and tenants.

Using archival records was crucial for establishing a historical framework and comprehending the company's development. Reports, whether internal or external and e-mails provided critical information on financial performance, market trends and important achievements. Examining the corporation's and clients' websites provided valuable information about their public perception, market strategy and client interactions.

Combining data from interviews, the field visit and documents enhanced the depth and reliability of the case study through triangulation. The triangulation of multiple data sources

strengthened the validity of the findings, ensuring a well-rounded and reliable academic case study.

Employing a multi-method approach offered a thorough perspective of SP&F. The interviews provided a detailed insight of the human element by documenting the viewpoints and experiences of important individuals. Analyzing archival documents yielded a strong basis of historical and economic information. Studying websites and emails helped in comprehending the exterior image.

Data was systematically analyzed using qualitative methodologies to identify patterns, themes and major topics.

Using triangulation with numerous data sources enhanced the credibility of the conclusions, guaranteeing a comprehensive and dependable academic case study.

3.4.4 Camposol Case Study

In order to carry out this case and similarly to previous case studies, Camposol case study used a systematic methodology that included field visits, in-depth interviews and archival data analysis to gain a profound understanding of the subject.

The main aspect of the technique included a field visit where researchers could study the physical environment, interact with key players and collect on-site insights. This method allows for a direct comprehension of the environment in which Camposol functions, encompassing its infrastructure, procedures and any specific details that could influence the organization.

10 comprehensive interviews were conducted from January to May 2024 (1 with the Managing Director, 1 with a founder (ex-CEO and former employee, responsible for lawn introduction product), 1 with the Production Assistant, clients and landlords). The interviews were deliberately selected to encompass viewpoints from crucial persons in the firm, such as high-ranking executives, department heads, or other pertinent stakeholders. The interviews lasted an average of 1h10, allowing participants to provide in-depth ideas and viewpoints on several elements of Camposol business model innovation. Aside from the main data collection methods, the researcher also performed archival data analysis by examining sources like the organization's website, internal reports and annual reports. This method contextualizes Camposol's current status by analyzing historical data and organizational records, providing a longitudinal viewpoint.

In all cases, the interviews were carefully recorded and transcribed to accurately capture the details of the discussions. Transcription was essential for the analysis process, enabling

researcher to explore content, recognize patterns and extract useful insights for a deeper understanding of the business model innovation.

3.5 Data Analysis

The data analysis procedure involved five key phases that included inductive and deductive reasoning, as well as open coding, axial coding and theoretical coding, following an abductive logic (Timmermans and Tavory, 2012) and led by the Gioia pattern-inducing method (Gioia et al., 2013). Interviews were recorded and processed along with field notes and archival documents to uncover key themes and patterns.

Thematic analysis was employed to analyze the data collected from the interviews and some of the archival documents using MaxQDA software. In accordance with the recommendations put forward by Braun and Clarke (2006), we implemented an iterative and systematic approach to ensure the rigor and reliability of our analysis. In order to uphold accuracy and consistency in our analysis of the data, we undertook a series of procedures involving data coding and theme identification (Saldaña, 2021).

The initial phase of our data analysis involved open coding, wherein we systematically examined each individual data item, including interview transcripts and archive records, in order to identify early codes and themes. Subsequently, we proceeded to revise and enhance the initial codes, aiming to develop more conceptual and abstract themes that could be effectively applied over the entire dataset (Braun and Clarke, 2006; Saldaña 2021; Corley and Gioia, 2004).

The utilization of triangulation and reflexivity were essential in order to ensure the credibility and dependability of our research outcomes (Strauss and Corbin, 1998). These measures contributed to enhancing the trustworthiness of our findings and elevating the overall quality of our research (Glaser and Strauss, 1967).

As a consequence, a preliminary framework was formulated, elucidating diverse drivers, encompassing both internal and external factors, which have exerted an influence on the company's business model innovation during a span of multiple years. During the succeeding rounds of interviews, our objective was to further develop and elucidate the developing concepts, as well as to find any potential interrelationships between the various categories and patterns. Throughout the course of the interviews, we conducted a comparative analysis between our early findings and the existing body of literature on the factors that drive business model innovation. This process served to enhance and authenticate our developing

interpretations. Furthermore, we utilized secondary data sources to corroborate, authenticate and enhance the insights obtained from the interviews.

In conclusion, we successfully incorporated the developing categories into a comprehensive theoretical framework and performed a last round of targeted coding to assure thorough exploration of all emerging categories and attainment of data saturation (Saldaña, 2021).

Chapter 4: Case Analysis

The case analysis chapter was developed starting with the individual analysis of each case study, which was then consolidated in a cross analysis to provide more profound insights and allowing to identify trends.

It examines the four single cases rigorous and systematically. Every corporation (or corporative group) from each case study is a distinct unit of analysis that provides a complex array of data and experiences requiring careful analysis. This chapter starts examining each case study, doing a pattern analysis and obtaining particular results for each situation.

The analysis of each case study, enable us to explore the specific characteristics and richness of different external and internal environments. We focused on uncover the individual dynamics, problems, drivers, motivators and successes of each case by using a detailed analytical approach. We analyzed aspects of internal and external factors and influences that contribute to the overall case and the business model innovation process of each case study.

The individual case analysis provide insight into the complexities of each specific scenario, but the final goal of this chapter is the cross-case study. The single-case analysis prepares for a detailed exploration, establishing the essential foundation for the following cross-case analysis. Here, we analyze similarities, differences and universal themes that go beyond individual cases limitations. By synthesizing ideas from several cases, we gain a deeper understanding of our main research questions. As we examine these four single cases, we move towards a comprehensive understanding that goes beyond the individual cases and its specificities. This cross-case analysis is the final piece of the analysis, offering a comprehensive overview that not only summarizes our findings but also sets the foundation for wider implications and following discussion.

To elucidate the reasoning behind the choice of particular case studies, we will consider the criteria defined in the Ghezzi and Cavallo (2020) framework for business model innovation. The screening procedure aims to discover corporations that operate in different levels of market dynamism and internal organizational dynamics.

The framework focuses on recognizing firms that are playing in different degrees of market volatility and have different levels of internal dynamics.

Vitacress, selected as a case study, works in a steady market context that mostly deals with lettuce and fresh vegetables. However, it demonstrates significant internal dynamism, incorporating Marketing and packaging practices and changing how industry sells vegetables.

Driscoll's, the second case study, operates in a volatile market characterized by rapid technological innovations and high client expectations. The internal dynamics of Driscoll's, especially in the reconfiguration of their supply chain (externalizing production) and elect R&D as core activity demonstrate how firms manage market instability and use their own talents for innovation. Driscoll's disrupted its market. Even keeping its market leader positioning, it influenced the market of fresh berries and progressively competitors started to replicate its business model and supply chain model.

SP&F, on the other hand, serves as an illustration of a more subdued corporation in a calmer market, such as the industry of ornamental flowers and peas. SP&F's has the capacity to adjust to market circumstances, innovating their business model without initiating radical industry changes.

Camposol serves as an illustration case of how a company may successfully adjust to market changes by meeting the growing need for lawn goods. Camposol exemplifies how companies adapt their business models to align with changing market conditions and business model innovation. Markets changed, were educated as well as clients (gardening corporations) and the use of mattress grass got more massified. Camposol adapted to this market changes and innovated its business model with this.

The strategic reasoning behind the selection of each case study, in line with the criteria set by Ghezzi and Cavallo's framework aims to contribute to a thorough comprehension of business model innovation in dynamic marketplaces within the agribusiness sector.

4.1 Vitacress Case Study

4.1.1 The Corporation

Vitacress, a renown fresh vegetables producer, based in Europe was founded by Malcolm Isaac in 1951. The company, based in Hampshire, UK, grows and distributes salads and fresh herbs, with a special focus on lettuce, watercress and baby leaves spinach.

Malcolm Isaac, engaged in freshwater watercress farming in the UK in the 1970s. As the company grew and demand increased, limitations on production capacity became evident, mainly given the UK climate that was not favorable to winter production. In 1981, Isaac took advantage of a touristic trip to the Algarve region in Portugal and considered to try out watercress cultivation in this unfamiliar area. The unique climate, that allowed all-year round production and abundant soils of the Algarve region were perfect for growing watercress, leading to the creation of Vitacress operations in Almancil, Quinta do Lago.

The 15-hectare growing land established in 1981 signaled a new era for Vitacress. The company quickly extended its market by exporting watercress to England and other European countries. This choice was both strategic and a demonstration of Vitacress's dedication to offering top-notch, fresh products to a wider customer base.

Vitacress acknowledged the importance of innovation in maintaining product quality, shipping convenience and hygiene as the business flourished. The company made a significant innovation going from export products in bulk to start bagging and package its fresh goods, which not only made shipping easier but also improved hygienic standards. Vitacress re-differentiated itself in the market by transforming its packaging from a functional necessity to a distinctive feature, standing out in an industry where fresh products were typically seen as a basic product with no big differentiation (almost a commodity).

Vitacress expanded in 2003 by building more warehouses, which featured a modern washing facility. The idea intended to optimize shipping methods while upholding rigorous hygiene and sanitary norms. Its commitment to adapting to current trends while maintaining their traditional quality-focused approach was highlighted by the incorporation of more advanced and technological facilities and methods.

Vitacress evolved from its modest origins to establish itself as a prominent figure in the fresh vegetable sector. The company's journey, from Malcolm Isaac's visionary cultivation efforts to the strategic relocation to South Europe and subsequent advancements in packaging

and facilities, demonstrates a seamless integration of tradition and modernity. This has enabled a consistent delivery of high-quality fresh products to discern consumers globally.

4.1.2 The Market

Vitacress operates in the fresh vegetables industry. In this industry it is perceived the strong influence of white label branding and established competitors with private brands. White label branding is a common technique in retail and distribution where existing products are duplicated - eg. distribution/retailer brands (Warlop and Alba, 2004).

Vitacress has carefully positioned itself as a pioneer in promoting innovation and defining industry standards, appealing to cost-conscious consumers.

The competitive environment is defined by competitors whose business strategies focus on fulfilling customer needs. Vitacress has acknowledged this tendency and has made substantial investments in comprehending and predicting consumer requirements. The company's dedication to fulfilling client demands surpasses simply imitation, as it has actively participated in testing and development, stating that competitors are effectively copying what Vitacress originally introduced. Vitacress has evolved into an innovator, consistently pushing the frontiers of the business and fostering the branding and packaging of their products, making the products stand out competition and imposing some differentiation in products that the consumers could not differentiate upfront.

Vitacress currently holds a substantial 15% market share on fresh salads, establishing itself as a major player in the business. The company's strategic orientation goes beyond engaging directly with consumers, as it also serves as a significant supplier to retail brands. This dual role emphasizes the brand's impact and market penetration, strengthening its position in the fresh produce industry.

Vitacress distinguishes itself from competition by focusing on various aspects. In addition to the usual aspects of service, quality and innovation, the company utilizes its knowledge in the specialized field of baby leaf products. Baby leaf goods require unique knowledge because of their delicate nature and slower decay compared to cut veggies. This specialization establishes Vitacress as a dependable and informed authority in the market, strengthening its competitive advantage.

Although some competitors are praised for their innovative strategies, there is a slight worry over the perceived quality of their products. Vitacress wants to eliminate doubts about the balance between originality and product quality by focusing on innovation and addressing

client demands. Vitacress is positioned as a visionary leader in the fresh produce industry due to its strategic focus on innovation, quality and market awareness.

4.1.3 Business Model Disruption

In the early 2000s, Vitacress experienced a significant disruption that changed its market positioning and paved the way for continuous expansion. The company started to sell bagged and labeled products, contributing to differentiation of the product.

In the beginning of this research there was a pre-conception from the researchers that the focus of this strategic change had as main goal the product distinction achieved through packaging (that was not a practice in these product category) and branding. With packaging and branding, lettuce and other fresh vegetables that were almost a commodity - basic goods - were transformed into a unique, value-enhanced product for clients. This redefined the competitive environment and positioned Vitacress as an industry innovator. Later it was perceived that product differentiation though labeling and packaging was not a goal itself.

The initial goal with packaged products was convenience (and hygiene) and facilitate transportation of the products (less weight and product conservation).

The corporation realized later that by distinguishing its products through packaging (first) and branding (later), they could surpass their competitors and leave a lasting impact on consumers.

The packaging had the ability to tell a story, convey high standards and impact consumers' buying choices. Vitacress invested in new and improved packaging methods to improve the visual appeal of their products and prolong shelf life, guaranteeing freshness and quality for consumers.

The brand allowed the Vitacress products to distinguish on supermarket shelves, attracting the attention of consumers who are overwhelmed with options. The packaging visually symbolized the quality of the product, the standard quality delivered, establishing a direct link with the Vitacress brand and its dedication to perfection.

With the packaging it was possible to explore the brand. The adjustment allowed the inclusion of the brand and name on the packages, creating a visual identity; it was a strategic endeavor to reinvent Vitacress in the perception of consumers. The brand conveyed freshness, reliability and innovation. Vitacress evolved from a conventional supplier to a symbol of excellence (quality level) and a pioneer in the fresh products industry through a careful branding approach.

The act of distinguishing products through packaging and branding had significant effects on customer loyalty and repeat purchases. Vitacress delivered a high-quality product and established a unique and unforgettable brand experience. Consumers who recognized the quality label on Vitacress packaging were more prone to repurchase, as they had confidence in the product's consistent and reliable standards.

Moreover, this strategic disruption enabled Vitacress to set itself apart from its competitors. Vitacress was seen as an innovator and trendsetter in the market, distinguishing itself from others who were viewed as providing non-differentiated fresh food. The company's dedication to investing in packaging technology and brand identification demonstrated its innovative approach, establishing a standard for the industry, creating value, delivering value to client and capture value.

Upon further analysis of the case study, it was clear that Vitacress did not intentionally incorporate packaging and labeling into their business model to crate differentiating factor on supermarkets selves. These tactics were developed in response to various challenges and opportunities in the changing fresh produce market, including easiness to transport (lower weight, quality keeper and convenience).

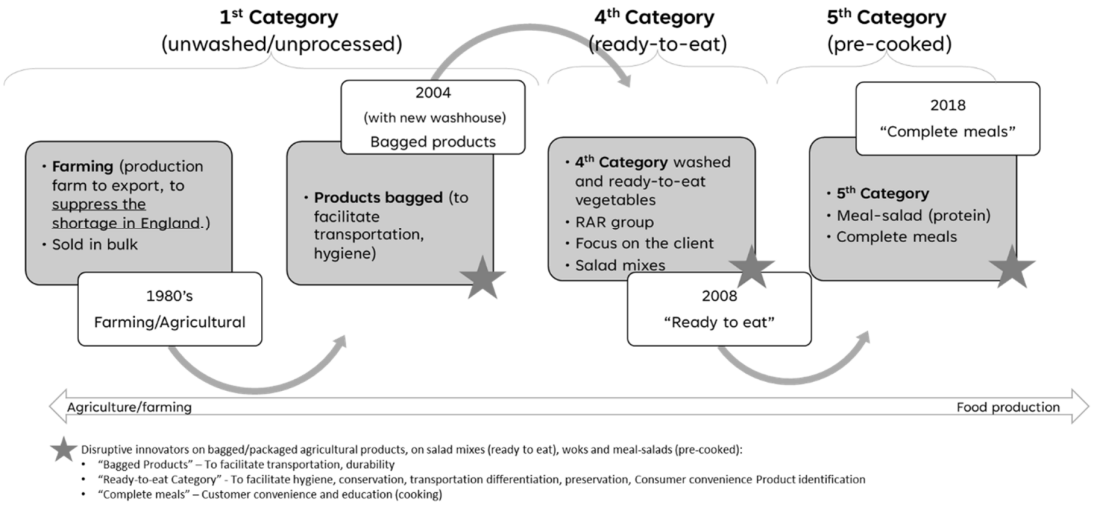

Figure 4.1 - Disruptive Innovation Along Vitacress History

Source: Own creation based on Vitacress interviews and archival data

4.1.4 Innovation Funnel

Vitacress evolved from being a simple agriculture/farming corporation to one that differentiates itself from rivals by building a recognizable brand and focusing on customer needs, preferences and market trends. Vitacress shows as dedicated to making improvements, coming up with solutions for everyday customer problems, setting itself apart in the vegetable market, making salads simpler to prepare, boosting salad consumption and convenience.

The business exemplifies an inventive attitude, putting the needs of the consumer first and adhering to industry best practices. Perceiving this, Vitacress kept innovating and fulfilling customer need and expectations, conducting continuously market inquiries and research. They constantly test new items in an effort to be responsible innovators. The "ready-to-eat" category, which includes washed salads, cleaned veggies and wok meals, was introduced in 2008; the "complete meals" category, which includes ready-to-serve salads with protein, was introduced in 2018.

In 2022, the corporation updated or generated more than four hundred product references (for new or existing products). Establishing new product categories necessitates fresh packaging and branding to go along with the product launch in order to gain the trust of their B2B clients. All in all, the company's dedication to product innovation seems clear from its range of projects, alliances and product offerings.

They have an advantage in creating the freshest, tastiest and healthiest goods possible because of the distinct European fields' climate. Aside from being hygienic, the company's packaged and washed product also has the benefits of preservation, product distinction and simplicity of transportation. In the end, their primary objective has been to satisfy customers by offering them a high-quality, easily recognizable and easy product that goes above and beyond their expectations.

Considering that the product has a short shelf life, Vitacress conducts business with agility. They have a short window of four to five days from the time of harvest the product, to make them available to final customer and being consumed; this means they have just one or two days to harvest, wash, package and deliver it to clients. Due to their short operational chain, they must be agile and fast to react to unforeseen circumstances, such as changes in the weather or other difficulties that impact the crop in the field.

Thankfully, the company appears to have the backing and support of its corporative clients, including supermarket chains, who aren't afraid to take chances and invest on new products and

services. Additionally, consumers are available and willing to try these new products out on the market.

Acknowledging this, Vitacress implemented the so-called "innovation funnel" in which, every once or twice a month the commercial area and the brand manager, bring feedback from customers, collected through direct contact (supermarkets, fairs) and market research. They propose new products/solutions in a meeting with the top management (Production, Finance, Sales, Quality) where these solutions are brainstormed and discussed (1st gate – briefing gate). The approved/successful ideas go to a feasibility gate (2nd gate), where are financially analyzed and budgeted. The financially sustainable pass to a 3rd gate (creativity gate) where are defined the packaging, receipt correction, organoleptic teste, etc. The pre-launch gate (4th gate) leads with labeling and documentation and the product launch in the 5th gate, when best products are launched in the market.

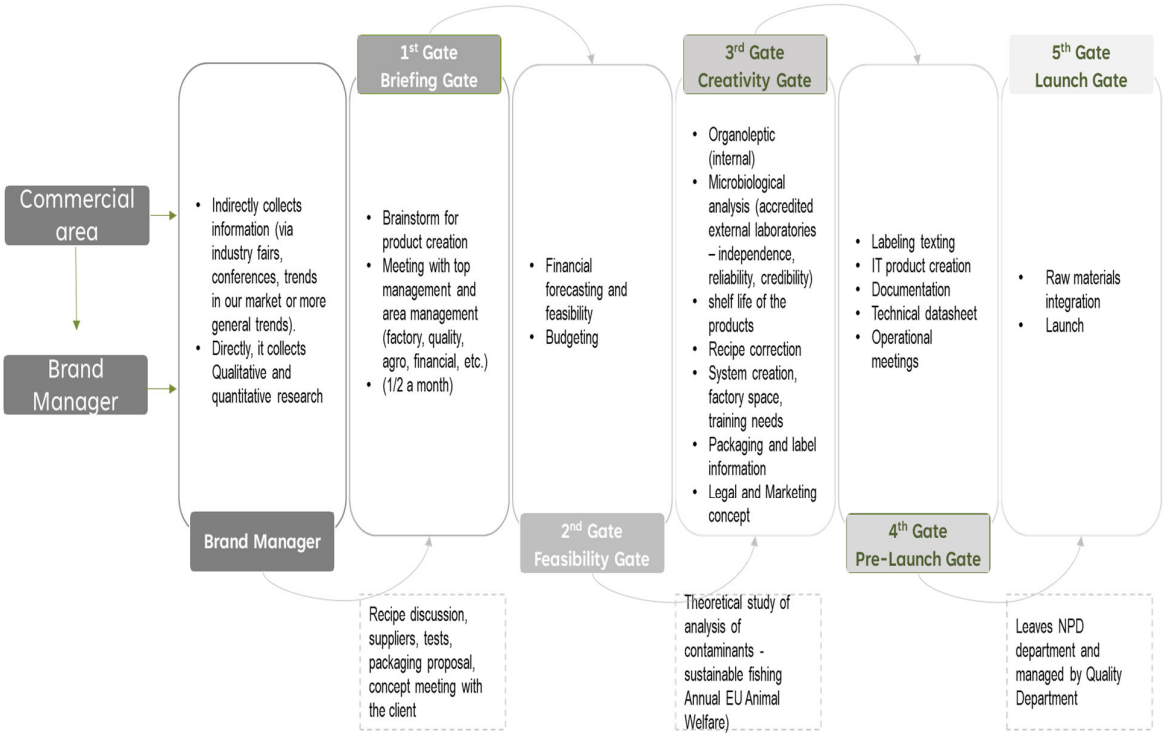

Figure 4.2 - Vitacress Innovation Funnel

Source: Own creation based on Vitacress interviews data

4.1.5 Analysis

Thematic analysis is the method that we employed to identify themes and patterns in the qualitative data. We employed a deliberate and iterative approach, as suggested by Braun and Clarke (2006), to ensure the rigor and reliability of our analysis.

We used data coding and theme identification to make sure our analysis of the data was rigorous and consistent.

The data analysis began with open coding, in which we examined the data (interview transcripts and archive documents) to identify the initial codes and themes. These initial codes were then refined and we identified and draw links and connections between the themes to obtain more abstract and conceptual themes that could be applied to the entire dataset.

We employed two methods to ensure the validity and reliability of our findings: triangulation (data sources triangulation) and reflexibility. By taking these steps, we were able to improve the overall caliber of our investigation and the reliability of our conclusions.

As a result, a draft coding tree was created, which identified several internal and external factors that had motivated and drive the company's innovation over the last years. Our goals in the ensuing interview rounds were to find any connections between categories and constructs as well as to elaborate and make sense of the concepts that were beginning to emerge. We supplemented and validated our evolving conclusions as the interviews went on by contrasting the preliminary findings with the body of literature already in existence on business model innovation drivers. We also used secondary data to confirm, enhance and validate the results of the interviews. In order to make sure we had investigated every new category and reached data saturation, we lastly incorporated the emerging categories into a broad theoretical framework and carried out one last round of focused coding (Saldaña, 2021). Figure 4.3 presents the case coding tree.

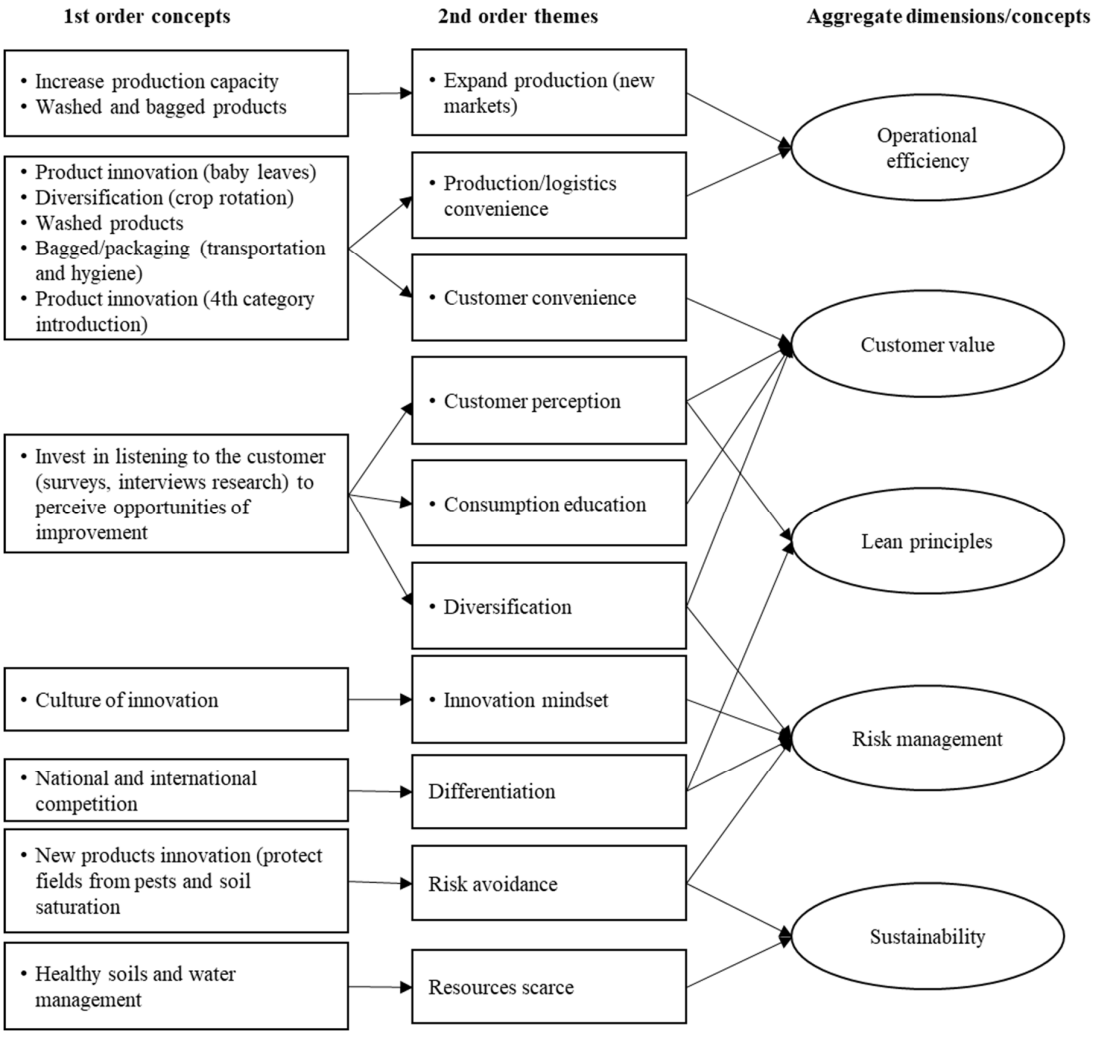

Figure 4.3 - Vitacress Case Coding Tree

Source: Own creation based on Vitacress Case interviews and archival data

Innovation in business models seems essential to organizational strategy and expansion. When the business model innovation of Vitacress, an agribusiness organization, was analyzed, a number of important themes and patterns came to light (Figure 4.3).

Our empirical analysis focused on exploring and capturing the business model innovation process of a corporation playing a high dynamic role, when it innovates its business model in a moderate dynamic environment (Ghezzi and Cavallo, 2020). According to our findings, studying business innovation process we could identify patterns as Customer value, Lean

principles, Sustainability, Risk management and Operational efficiency. In this section, we provide a detailed description of our findings.

- Operational efficiency

Vitacress enhanced customer value creation and production by innovating its business strategy. By introducing new packaging and labeling and optimizing processes, the company was able to identify and considerably decrease inefficiencies, reduce waste and make the most use of its resources.

"When we introduced packaging, we were not so aware that we were innovating the business model. It was more to facilitate transportation and for convenience. […] Nowadays, we are actively working on it [business model innovation] and daily product innovating, introducing the "ready-to-eat" and the complete meals category"

Vitacress Board Director

For the company, this improved convenience intended to simplifying transportation and lowering expenses. Sales and earnings increased (value capture) along with customer satisfaction and loyalty as a result of the company's faster and higher-quality deliveries of goods. The company's ability to remain competitive in a rapidly changing business environment was facilitated by the adoption of agile procedures. The research indicates that efficiency plays a critical role in the development of new business models because it allows organizations to lower expenses, increase productivity and respond quickly to shifts in the market and in customer demand. It emphasized the importance of prioritize efficiency and embrace agile and responsive procedures in order to stay ahead of the competition.

"We feel we changed the way the market operates. Our products are very easy replicated"

Vitacress field visit

"We introduce the baby leaf. Of course the customer wants and prefers. But if much more efficient. The product starts perishing by the cutting edge. And the baby leaf as the smallest area or cutting edge. It perishes latter"

Vitacress Board Director

In conclusion, businesses place a high priority on risk management through innovation, efficiency and product variety. One of the primary internal motivators to business model innovation is risk management. One example of leveraging these internal impulses to lower operational risks and differentiate through product innovation is the Vitacress. By cultivating an innovation culture and consistently improving processes and products (as Vitacress does with the innovation funnel process), corporations can effectively mitigate risks and sustain their competitiveness in ever-changing and highly competitive markets.

- Consumer value

Vitacress's compromise to continuously improving internal efficiency fosters innovation, growth and the delivery of value to customers and capture value for stakeholders. The company achieved this by offering cleaned and packaged salads and vegetables for customer convenience and hygiene, growing its product lines through crop rotation and adding less perishable goods like baby leaves. The direct contact to customer and market research were also highly valued by Vitacress as ways to understand customer needs and expectations and introduce new products. This helped the company promote diversity, creativity and consumer education. For example, the ready-to-eat line was developed in response to consumer demand for quick and healthy meal options.

In conclusion, consistent focus on creating value to customer and investment in market research and knowing the customer, through innovation improvement can foster creativity, encourage corporate growth and benefit stakeholders and clients. Vitacress achieved this by developing new goods, keeping customers interested and launching fresh product lines that meet market demands while remaining competitive.

The innovation funnel, in which key stakeholders and departments meet 1/2 a month with information from customers to brainstorm and decide the introduction of new products, is the ultimate illustration of this commitment.

- Lean principles

We could identify Lean principles as a pattern in studying business model innovation on Vitacress emphasis on efficiency and customer-centricity. These principles could be found when the corporation prioritizes focus on R&D and market research to understand and meet customer preferences effectively. The implementing and regular exploration of the innovation funnel helps the development process, ensuring many suggestions are experimented and that

only the most viable ideas progress. By continuously iterating based on customer feedback and market insights, lean approaches enable businesses to innovate swiftly and efficiently, reducing waste and maximizing value creation. This dynamic and responsive model seems crucial for sustaining competitive advantage in evolving markets.

- Risk management

It was possible to perceive that Vitacress constantly prioritize risk management, including market risk and operational risk like harvest, handling and shipping concerns, risk management is a major internal motivators of business model innovation. By putting efficiency first and identifying and eliminating inefficiencies in their operations, businesses may reduce the possibility of errors, defects and other problems that could cause financial losses or harm to their reputation.

Product diversification is a strategy that can increase sales, meet consumer preferences but it is very much focused on lowering risk and to manage operational risk. Vitacress was able to accomplish crop rotation through the introduction of new products, thereby decreasing the probability of crop failure caused by weather, pests, or mildew.

"Of course we have different offers [new products] along time. We need to give what the market asks but also what the land gives. It is not possible to produce always the same crops, it depletes soil nutrients. It is necessary to rotate crops"

Vitacress Production Department Director

The company's innovation culture, which was employed to promote innovation and manage risks, resulted in an attitude of constant and everyday innovation. Product innovation helped the company stand out in both domestic and international markets, manage market risk and deal with competitors who commonly copy creative goods. This allowed the company to differentiate itself.

"The market replicates the product very fast and easily. To avoid the replication risk or the risk of shrinking margins we need differentiate from competitors we need to offer new things."

Vitacress field visit

- Sustainability

Sustainability is a key aggregator concept on studying business model innovation. Motivated by the need to address client concerns about plastic use and fertilizers. Vitacress aim to use water smartly and efficiently, focusing on soil preservation and crop rotation to enhance soil health and productivity. Additionally, there is a strong emphasis on social responsibility, fostering a sense of community in moderately labor-intensive activities. Innovating with sustainability in mind not only meets customer demands but also ensures long-term resource availability, promotes environmental stewardship and strengthens community ties, thereby aligning business practices with broader ecological and social goals. Vitacress goes beyond these factors and perceive sustainability as a way to create economic value:

"The land needs care to be healthy. Only healthy land can be productive" (...) "we need water every day. We need consume it wisely…not only to be collectively conscious but because we really need it. If we don't have water, we can't produce."

Vitacress Production Department Director

"Personally, I don't like some "biological production practices", that some players have […], because it kills everything in the soil. This cannot be good to the soil in the mid-long run. It will destroy the land productivity in the future."

Vitacress field visit

4.1.6 Conclusion

In conclusion, the case study of Vitacress highlights key drivers and motivators of business model innovation: efficiency (and agility), customer value and risk management as well as lean principles and sustainability.

Efficiency was enhanced through increasing production capabilities, introducing washed and bagged products and incorporating baby leaves for their longer shelf life and crop rotation benefits. These innovations facilitated transportation and logistics, boosting overall operational effectiveness.

Customer value was elevated by offering greater convenience, improving product perception and diversifying the product range. These changes met consumer demands more effectively, ensuring a competitive edge in the market.

Risk management was also a crucial motivator, prompting diversification, fostering a culture of innovation and differentiating from competitors. Introducing new products reduced cropping risks and positioned Vitacress as a proactive market leader.

Vitacress's internal dynamism, evidenced by its innovation funnel, allowed it to reshape industry standards in a moderately dynamic market. By embracing lean principles, as described by Ries (2011), Vitacress demonstrated the agility necessary to proactively innovate and drive new product development. This approach enabled the company to maintain a competitive edge and set new benchmarks in the fresh products industry.

[This page is deliberately left blank]

4.2 Driscoll's Case Study

The case study of Driscoll's illustrates a company that operates in a highly dynamic market, specifically the berries industry, which is characterized by significant volatility and changes in customer preferences and technological advancements (Ghezzi and Cavallo, 2020). Driscoll's also plays a prominent role in driving and disrupting the industry, with other competitors attempting to replicate its business model.

4.2.1 The Corporation

Driscoll's is a five-generation family-owned group that produces fresh berries with the mission of "*continuously delight customers*".

James Walters initiated the production and sale of strawberries in California's Pajaro Valley in the XIX century. Nowadays, there are 5 generations of producers in California (initially with strawberries, currently including blueberries, blackberries and raspberries) with a wide presence in the community.

The group initiated developing high-quality varieties of strawberries and, after meeting the demand of local markets, started to expand their supply to nearby markets and gradually extended to more distant markets. It was in 1865 and as demand increased, the use of freight trains became integral to the distribution of these fruits throughout America.

In the early 1900s, brothers-in-law Joseph "Ed" Reiter and Richard "Dick" Driscoll (Figure 4.4 - Group family tree) embarked on their strawberry-growing venture in the Pajaro Valley. Their renowned "Sweet Briar" strawberries, dubbed the Banner variety, gained widespread acclaim. Simultaneously, Joseph, along with his son Joe Reiter and Earl Goldsmith, expanded their agricultural pursuits to include raspberry cultivation on a small farm in California's Santa Clara Valley.

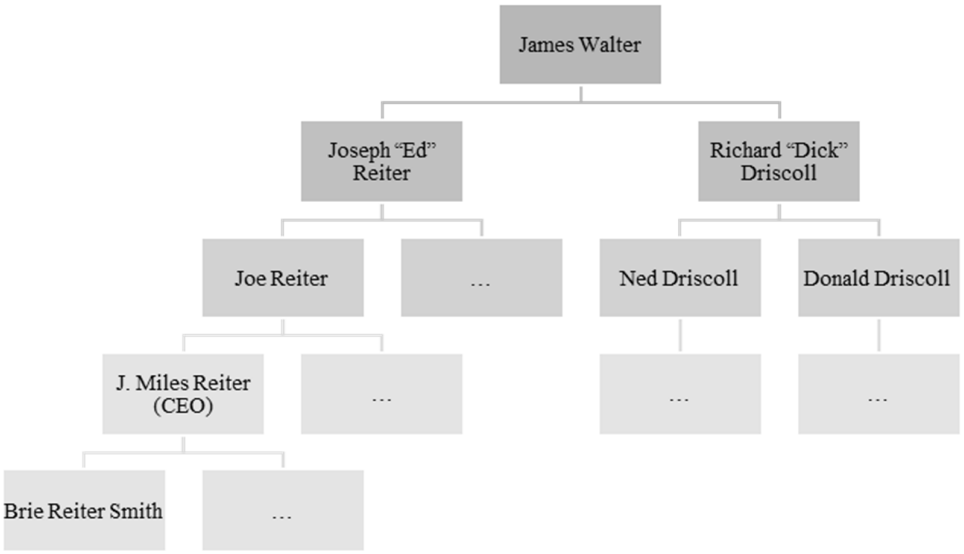

Figure 4.4 - Group Family Tree

Source: Own creation based on Driscoll's websites and internal archival data

In the 1940's Ned and Donald Driscoll, along with Kenneth Sheehy, T.B. Porter, M.W. Johnson and Joe Reiter, founded The Strawberry Institute. This institute aimed to elevate strawberry varieties through dedicated research and breeding efforts. Independently, brothers Robert and Terry Sheehy joined the Driscoll's team, initiating strawberry cultivation in Santa Maria, California.

Driscoll Strawberry Associates, Inc. was established in the 1950s and started to sell premium, fresh strawberries from California. The first strawberry variety to be patented, "Z5A" was introduced in 1958 and differentiates as for longer season and for facilitating long-distance shipping of the fruit. With this innovation, Driscoll's takes the lead in fresh berries.

The Strawberry Institute and Driscoll Strawberry Associates, Inc. merged in the 1960s. Research, breeding, production, sales and distribution were the main priorities of the newly formed business and on the following decade Driscoll's grower owners started shipping under a common label, "Driscoll".

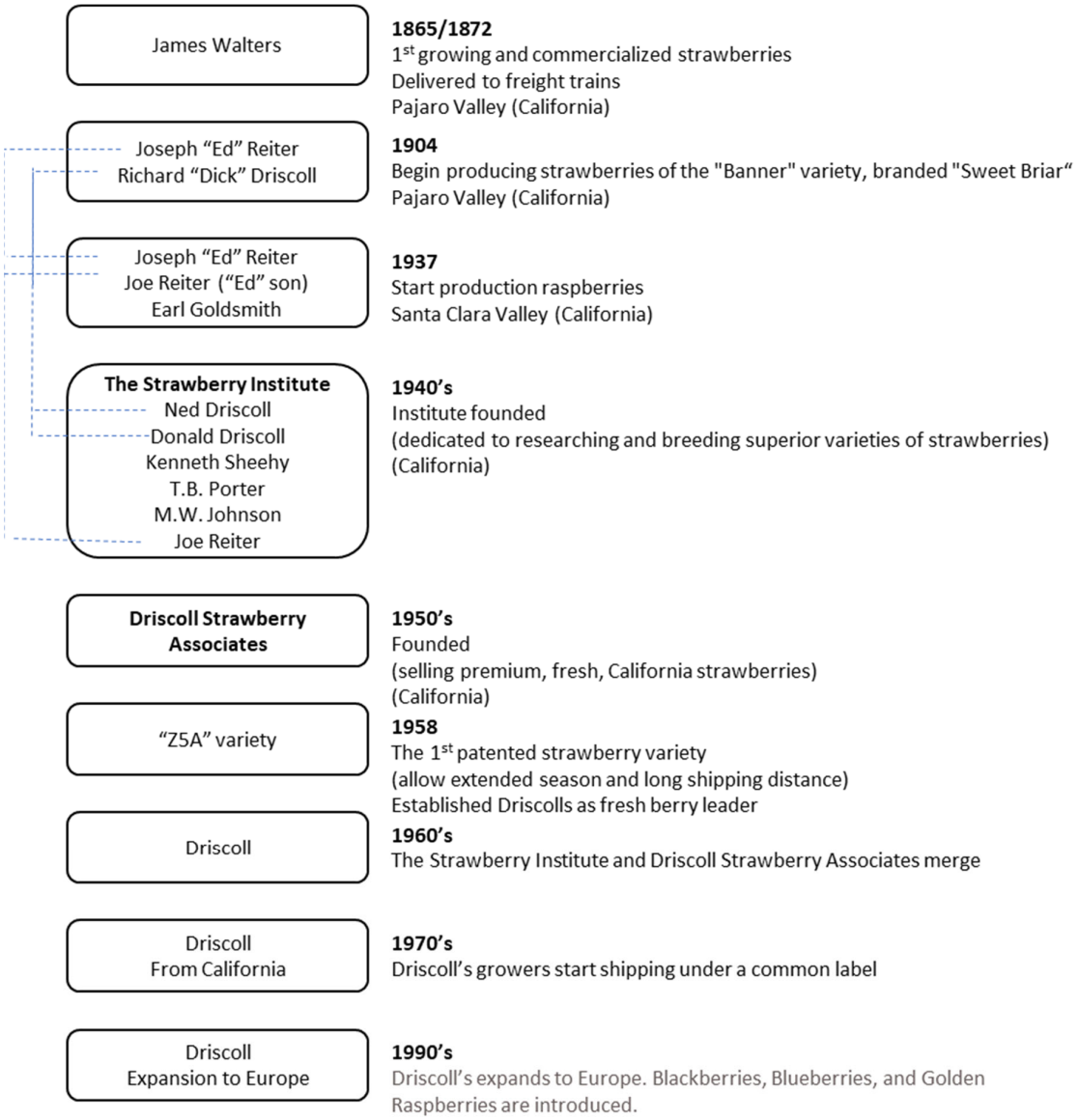

Figure 4.5 - Driscoll's Early History

Source: Own creation based on Driscoll's websites and internal archival data

Reiter Affiliated Companies

Reiter Affiliated Companies (RAC) was founded by the Reiter family and operates as an independent group (ownership and management) and while Driscoll's is responsible for R&D, logistics, commercialization and supply chain, RAC is focused on berry production. With a strong background in family farming, this company is renowned as the leading global producer of a wide variety of fresh berries.

Garland and Miles Reiter, the grandchildren of Joseph “Ed” Reiter, started to work in the family enterprise during the latter part of the 1970s. They began directing their efforts on the commercial sector and the development of novel fruit varieties. With the family legacy, the brothers embarked on a venture to expand their commercial operations and achieve recognition in the field of agriculture in the United States. They increased their investment and extended into other territory, introducing new varieties specifically developed for these regions. In the last quarter of XX century, RACs consistently grew (every 5 year) due to farming innovation, introduction of innovative agriculture methods and a sustainable growth strategy.

The business model innovation under analysis was introduced in the 1990s with the formation of new partnerships. To conquer new territories, the family introduced a revenue-sharing partnerships (with slit differences in every region) with local farmers, in which local farmers (landowners) would get from Driscoll’s the plants to grow (with specific and adapted DNA), being responsible for production and crop and sell back the final product to Driscoll's.

This legacy is currently present in many areas across the United States, Mexico, Europe, Northern Africa, Peru and Canada. This heritage originated in the humble fields where their family's agricultural endeavors commenced and persists to this day with the individuals and partner farmers who embody the Reiter Affiliated Companies.

4.2.2 Internationalization Process and the New Business Model

4.2.2.1 Mexico

BerryMex, a subsidiary of Reiter Affiliated Companies (RAC), initiated Driscoll’s expansion in Mexico in 1991. In its initial stages, BerryMex acquired expertise and evolved into a well-regarded supplier of berries to the international market. As a result, RAC gained essential knowledge on how to adjust to Mexico's varied climate and topography, as well as an unparalleled chance to fully experience the lively Mexican culture. Thanks to this cross-border partnership, RAC has expanded from a small experimental area in Jocotepec, Jalisco in 1991 to become the leading producer of a variety of fresh berries in both Mexico and the United States by 2000. The company commenced its activities in San Quintin, Baja.

In Mexico, production is outsourced to farmers who are partners of Driscoll’s and affiliated corporations (RAC). As partnerships expand, the relationship with BerryMex also strengthens. It operates in the states of Michoacán, Jalisco and Baja California.

4.2.2.2 Europe

In the 1990's, there was a strong aspiration to broaden presence in other continents, namely Australia, China (Asia), Europe and Africa (EMEA). Transporting the berries in optimal condition during the plane flight posed a significant difficulty for Driscoll's. Additionally, the transportation costs imposed a substantial disadvantage for Driscoll's in comparison to its competitors in Europe. So, the corporation initiated deliberations regarding the beginning of its operations in Europe.

At first, the company exported products to the UK using airplanes. However, they soon encountered challenges in ensuring the fulfillment of their goal and dedication to provide the highest quality berries.

As the market and sales grew in Europe, there were a focus on making the supply chain more sustainable. There was a goal of decreasing transportation carbon footprint along with the decrease of transportation costs. This could be achieved moving production to Europe, which would also benefit the quality of easily perishable products. Driscoll's started looking for the best place to grow berries with the same latitude of Watsonville (California) - this latitude in Europe "hits" Southwest Alentejo (Portugal).

Investors contacted a local University in Agricultural area – Instituto Superior de Agronomia (University of Lisbon) researchers. At the time it was known that there was competitors' exploitation of berries in Spain.

However, in Europe, the superiority of the product that is reached in California [strawberry] was not achieved. The exploration in the USA is centered in San Francisco, where the climate is characterized by a lack of rainfall and temperatures ranging from 15º to 25º. The production curve for this region spans from April to October. In Mexico, production might be extended by an additional 1 to 2 months. There, the production is conducted outdoors in both locations due to the absence of rain and the availability of extensive and geometric fields, facilitating open-air exploration. However, in Europe, the limited land availability and unfavorable climate conditions (more rain) prevent open-pit exploration, leading to increased costs.

In Europe, the harvesting period spans from April to October (and all year-round in some locations).

After numerous years of genetic enhancements, a more affordable and more flavorful product is achieved (mainly for raspberries and blackberries) and the partnership model is replicated.

4.2.2.3 Portugal and Morocco

Despite California RAC's partners producing and export fruit for the European market, European producers still hold a dominant position in that market. RAC developed its farming operations in Zambujeira do Mar, Portugal (in conjunction with Maravilha Farms) and Agadir, Morocco, with the aim of only providing fruit for the European market. This was partially attributed to sustainability concerns (carbon footprint), the natural deterioration of fruit quality resulting from delays in air travel and the rise of transportation costs.

The regions mentioned had the substantial potential for expansion in berry production, despite the operations being relatively small in scale. Portugal's temperate climate facilitates year-round cultivation of raspberries and blackberries. In addition, the provision of top-quality fruit to European consumers has established a specialized market segment within the continent's economy.

Portugal initiated strawberry cultivation through a partnership with a well-established Spanish firm. Alconeras, situated in the Spanish area of Extremadura, is involved in the cultivation and manufacturing of strawberries, catering to both local and nationwide markets in Spain.

The group formed subsidiaries in Portugal, Spain, Europe and Morocco named Driscoll's Portugal, Driscoll's Spain, Driscoll's Europe and Driscoll's Morocco, respectively. They achieved organic growth by utilizing their own manufacturing processes and establishing collaborative partnerships with farmers. Farmers united by a common objective focused on the welfare of individuals.

Odemira, located in Portugal, has frequently been likened to California because of their resemblances.

4.2.3 Business Model Innovation

Partnership with local farmers, outsourcing all the production process (and occasionally outsourcing logistics), constituted Driscoll's primary innovation in the business model inside the globalization approach. The internationalization challenge encompassed significant risks, including operational, weather and environmental circumstances, local expertise and recruiting (harvesting is very human-resources intensive and automatization is (still) not viable, due to de fruit high sensitiveness) as well as a significant stake of investment (particularly in land). However, via partnership with farmers and including local farmers as being part of Reiter

family (RAC), these risks were effectively handled and mitigated, while also promoting shared responsibility and investment.

Driscoll's regards research and development (R&D) and sales as its core and differentiating factor and as a result, it does not delegate these functions to external parties.

Their *Misson* is to "*continuously delight the customer*". By continuously innovating exceptional breads that possess better quality in terms of flavor and durability, ensures satisfaction for the end consumer. The brand intends to be synonymous of the sensory delight of consuming fruit - individuals who appreciate it, repeatedly make purchases. Enjoy the experience, appreciate the brand and make repeat purchases. If the consumer has a preference, they will purchase a larger quantity of the product, resulting in increased product turnover.

"The retailer also likes our product and lead us to a superior positioning [relative to our competitors]. If the final customer prefers, buys more and the retailer has more product rotation. The retailer prefers the product and pays a prize, which Driscoll's reinvest."

Former Driscoll's Portugal Managing Director

If the store prefers the product, a higher premium will be given. Furthermore, Driscoll's keeps making investments in enhancing their fruits DNA.

Driscoll's engages in outsourcing production due to the perceived lack of core added value (as differentiating factor) in this area.

As an example of organization in Portugal, Lusomorango specializes in the consolidation of berry production, functioning as a producers organization. Currently, there are 40 producers in this association. Among them are multinational corporations like Reiter and Haygrove (originating from the United Kingdom) and some mid-size and smaller farmers.

4.2.3.1 Benefits of the international partnering production business model

The business model innovation is driven by various advantages acknowledged within the company and among partners: Harvesting accounts for 50% of the total cost. Growth process constitutes the remaining portion of the production process. The harvesting process is still done manually. This suggests that there must be a significant capacity for headhunting. Driscoll's perceives that recruiting for a single organization is significantly more complex.

Rather than opting for a bigger organizational structure with awards and objectives, Driscoll's decided to establish a system comprising multiple economic agents focused on

maximizing profit and share them among all the players. They manage dozens of productive agents in each country whose primary motivation is to outperform.

The production incurs the highest expenses. Out of the total revenue, Driscoll's allocates 85% to the production stakeholders, which is delivered to production partners. The remaining 15% of revenues, Driscoll's allocates the value to manage sales, logistics, marketing and transport.

Therefore, the choice of a partnering production business model allowed more accelerated and simultaneously, more conservative expansion. It allowed to manage better the high investment required and risk involved in the expansion: high investment expenses (land and operation) and greater uncertainties, including agricultural risks, local specificities know-how, adverse weather conditions, labor recruitment risks and potential losses.

4.2.4 Food Waste Concerns

In the constantly changing field of agribusiness, the need for sustainability has moved beyond being just a corporate obligation or a mere green image and has become a crucial catalyst for innovation. Driscoll's distinguishes itself as a model of how a dedication to sustainability may result in significant alterations in company procedures. The narrative of Driscoll's pursuit of sustainability, specifically in regard to food waste, is a captivating account of strategic innovation and consumer cooperation.

In 2019, Driscoll's faced a major challenge to mitigate food waste throughout its production and distribution process. Many berries were wasted due to poor selection and damage during the process. This was due to the traditional process of handling berries and selecting them through observation, before they were made available to the consumer. The process often led to the waste of edible fruit simply based on the physical appearance of the fruit. At the time, Driscoll's considered around 8 to 9 attributes in order to select the "optimal fruit" (the number of attributes depends on the fruit: strawberries, raspberries, blackberries or blueberries).

The company realized the food waste involved in this process and did not meet the needs and desires of the end consumer, who wanted to be more beneficial to the environment and did not value so many requirements in the fruit. The way Driscoll's found to do this was to listen to the consumer and understand which attributes they value, moving to 2 to 3 attributes and significantly reducing waste.

Driscoll's made a significant shift in its sustainability efforts by actively engaging customers in the decision-making process around fruit selection. In lieu of exclusively relying

on internal criteria, the corporation sought the input of customers what the two primary attributes that would dissuade them from purchasing or sampling a berry are.

Driscoll's adopted a new technique that brought about a significant change in their approach to quality control, signifying a paradigm shift. By engaging customers in the decision-making process, the firm recognized the need of aligning their products with consumer preferences. The decision was not only focused on waste reduction; it represented an intentional change in direction towards customer-centric innovation.

This decision was not linear in terms of capturing value. There was a considerable risk that providing berries with not so many requirements would damage the brand identity, the reputation and the quality perceived form customers (and the premium prize paid).

The far-reaching consequences of this environmentally friendly advancement were significant. Driscoll's not only improved the effectiveness of their berry choosing process, but also developed a customer collaboration framework that surpassed traditional market research. The firm showcased the compatibility of sustainability and client happiness, establishing a mutually beneficial situation where waste reduction and consumer preferences coexisted peacefully.

4.2.5 Water Management

Water management issues are prevalent across various regions. In California's Monterey Bay, specifically Pajaro Valley, the agro-sector generates approximately USD 1 billion annually but at a high cost due to an advanced water management system. Farmers here pay high irrigation fees, making food production costly at $400 per acre-foot[1] (Tabuchi, 2023 December, 29).

To address over-pumping, a water fee was introduced in the 1980s, with the Water Management Agency charging $30 per acre-foot in 1993, set to reach $500 by 2025. Initially rejected by farmers, this pricing mechanism has made Pajaro Valley a model for water conservation, attracting international study and proving effective in reducing extraction.

In Morocco, climate change, population growth and agricultural demands strain water resources. The government has improved water efficiency through drip and sprinkler systems, expanded water infrastructure and plans to build renewable-energy-powered desalination

[1] Acre-foot: the volume (as of irrigation water) that would cover one acre to a depth of one foot.

plants. The country plans to build 8 renewable-energy-powered desalination plants. These plants will join the 12 already operating. Desalination should produce 1.3 billion cubic meters of drinkable water by 2035 (Reuters, n.d.). Educational efforts promote conservation, yet comprehensive strategies are needed for long-term sustainability.

In Europe, particularly Southwest Alentejo, Driscoll's faces water shortages affecting agriculture and ecosystems. Research into advanced irrigation technology, sustainable water collection and storage technologies is ongoing, alongside with water transfer system (between dams), conservation measures and potential desalination projects. Driscoll's advocates for collaboration among government, communities and environmental groups to enhance water management and resilience.

4.2.6 Driscoll's Family and Community Wellbeing

Driscoll's has deliberately opted to foster a sense of family and community instead of merely focusing on business growth through internal manufacturing. This strategy not only corresponds to their dedication to social responsibility and compromise with the community but also acts as a catalyst for mutual success with their partners, namely farmers. Driscoll's has redefined the conventional connection between corporations and their partners, creating a cooperative environment that not only enhances integration within communities but also revolutionizes the allocation of responsibilities, distribution of revenue and the complex process of talent recruitment.

4.2.7 Analysis

Driscoll's innovated its business model on the expansion and internationalization strategy: it defines its business model in Mexico and Europe, supported into the internalization of 3 core pillars: Research and Development, Logistics and Sales.

Research and Development

Thorough market research is carried out in all regions, with a particular focus on target countries. Following that, experiments and discussions with farmers are conducted. Subsequently, an additional iteration of market research is carried out prior to the ultimate introduction of the product into the market.

There are specific factors that determine whether a product should be introduced to the market after a period of five years.

Today and increasingly Driscoll's bases itself beyond experimentation on statistical analysis.

As an example, in one specific location, every year Driscoll's plants more than 100.000 crossbreeding plants. During the 1st year, hired researchers (some of them through partnerships with knowledge centers and Universities), investigate and carry out observation and taste testing. Of the 100,000 plants, around 10,000 are maintained in year 2. In year 3/4, 10 plants passe the quality and taste test and in years 4/5, 1 of the varieties is selected as a commercial variety where the flavor and appearance were optimized and valued by local/regional customers.

These research and experiments are conducted in every geographical location as the breed is optimized and climate and environmentally adapted.

This is due to entrepreneurship culture, attracted talent and also to investment (80 million Euros annually in Europe) - in salaries, tests, camps, etc. - Driscoll's try to identify 1 new plant per year to be commercialized – adjusted to customer taste, quality and adjusted to local production characteristics. It is only after a few years of R&D investment that Driscoll's is able to reap the rewards.

Logistics

The second vector that Driscoll's finds it core is on the logistical aspect.

Driscoll's delivers the plant to the producer. By allowing producers to grow exclusively, Driscoll's can provide support and advice to producers. It has the logistics capacity to receive the production results (it collects all fruits cropped by growers). At the same time, concentrating logistic, provides scale economies and better distribution management. It is possible to react and fulfill client (wholesalers and retailers) demands more flexible and quickly. The fruit must be cooled first and then shipped until the final customer.

Sales

From the cooling warehouse, the berries are shipped throughout the international clients. Driscoll's establishes the entire sales process with the main supply chains in Americas and Europe. Centralizing the process allows the ability to provide the quantity the clients demand, on the time it demands, as well as negotiating better commercial terms and manage more efficiently the demand and the marketing process.

4.2.7.1 Thematic analysis

We utilized thematic analysis as a method to discern and categorize themes and patterns within the qualitative data. To ensure the rigor and reproducibility of our study, we followed a methodical and iterative method, as recommended by Braun and Clarke (2006). We employed various techniques for data coding and theme identification to ensure the precision and uniformity of our data interpretation.

The data analysis approach commenced with open coding, wherein we meticulously scrutinized each data element, including interview transcripts and archive documents (reports, interviews and videos), to ascertain the initial codes and themes. Subsequent iterations were further developed to generate linked concepts and more generalized and theoretical concepts that could be utilized across the full dataset.

To ensure the validity and dependability of our findings, we utilized two methods: triangulation (data sources) and reflexivity. Through implementing these measures, we successfully enhanced the overall quality of our research and the reliability of our findings.

Consequently, a preliminary structure was established, which delineated many intrinsic and extrinsic elements that had influenced the company's innovation during multiple years. Our objectives during the subsequent interview rounds were to identify any relations between categories and structures, as well as to further develop and comprehend the emerging concepts. We reinforced and verified our developing conclusions during the interviews by comparing the initial findings with the existing body of literature on the factors that drive and motivate business model innovation. In addition, we employed secondary data to corroborate, augment and authenticate the findings obtained from the interviews. To ensure comprehensive exploration of all new categories and achieve data saturation, we finally integrated the emergent categories into a comprehensive theoretical framework and conducted a last round of concentrated coding (Saldaña, 2021).

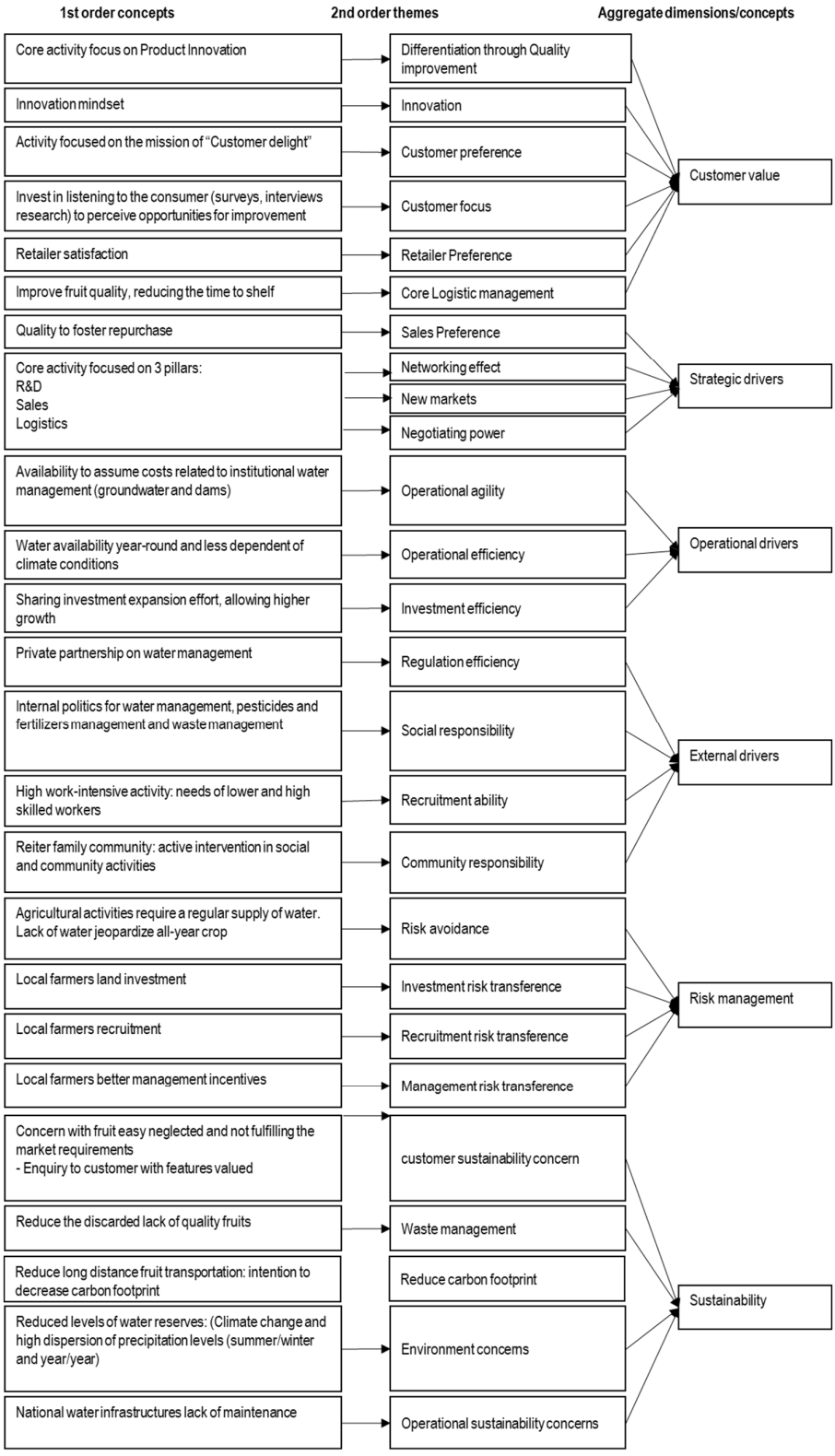

Figure 4.6 - Driscoll's Coding Tree

Source: Own creation based on Driscoll's Case interviews and archival data

- Customer Value

Driscoll's strategic focus on R&D is stimulated initially as key to their mission of "*continuously delight customers*". Careful breed selection based on product quality ensures client satisfaction. Superior quality boosts customer value (Teece, 2010) which requires exceeding client expectations. Client loyalty is built on repeated transactions. The value creation allows value delivery and capture.

This cycle creates a constant improvement loop (Ries, 2011). Customer pleasure boosts company and product perceptions. Along with product attributes, Driscoll's prioritizes brand image and customer pleasure. Strategic coordination of product innovation, quality, repurchase cycles and contextual views creates customer value. Driscoll's knows customer value is a continuous process comprising many vital parts. The virtuous loop (Ries, 2011) between customer pleasure and value attracts customers, merchants and the market to a distinctive brand identity.

To optimize customer value, Driscoll's innovates berry agriculture and uses cutting-edge breeding to lead the berry industry (Hanelt et al., 2021). This assures that its berries are flavorful, big and attractive, affording customers a great experience.

The organization tracks market trends and tailors its solutions to satisfy customers. Driscoll's' products address essential demands and provide an improved experience by considering customer preferences (Zott and Amit, 2008).

Driscoll's proactive approach to consumer input, the Build-Measure-Learn cycle (Ries, 2011), flavor issues, waste reduction and market developments all illustrate their focus on customer satisfaction. Driscoll's focuses on client demands for its berries.

To accelerate berry delivery to stores, Driscoll's emphasis is on supply chain efficiency, as fast delivery of high-quality items keeps berries fresher, enhancing customer happiness. Utilizing these methods, Driscoll's positions itself as a customer-focused, pioneering berry leader.

- Strategic drivers

This research could find the relevance of customer purchase preference given that it affects retailer satisfaction (Chesbrough, 2010). Emphasizing this, particularly retailer satisfaction, exposes a fundamental component that drives business model innovation. Understanding and

meeting retailer needs can lead to mutually beneficial collaborations, improved distribution channels and increased brand exposure, fostering product introduction innovation.

Benefit from network effects in the sales and logistics supply chain were strategic goals. A network effect from improving supplier, distributor and retailer relationships is perceived as boosting supply chain efficiency. Networked efforts and information sharing may enhance logistics, inventory management and supply chain operations, enhancing value creation and capture.

Additionally, concentrating on particular activities to increase negotiating power might foster business model innovation (create, deliver and capture more value). Driscoll's can deal better with distributors and retailers by managing procedures and centralizing resources. Combining operations may improve cost, negotiation strength, terms and business model.

Exploring new markets fosters business model innovation. The new business model allowed the faster and more effective markets exploration. Discovering untapped markets or extending product lines to serve different customer groups (Zott and Amit, 2010) may generate new revenue and boost corporate model development.

- Operational drivers - agility and efficiency

Operational drivers (Kafetzopoulos and Gotzamani (2021); Oliveira-Dias et al., 2022, Foss and Saebi, 2018; Ghezzi and Cavallo, 2020) are key to business model innovation, as the case of Driscoll's illustrates. Driscoll's managed institutional water resources, including groundwater and dams, with agility (Liao et al., 2019; Ghezzi and Cavallo, 2020; Troise et al., 2023). By implementing this proactive plan with other stakeholders, a reliable water supply is ensured, lessening the impact that the climate can have on berry farming. Water management investments help Driscoll's adapt to difficulties, demonstrating that deliberate operational decisions foster innovation.

The corporation commitment to a continuous water supply, regardless of the weather shows operational efficiency (Bocken and Geradts, 2002). Operational concerns reduce seasonal fluctuation, ensuring a more reliable and continuous berry production cycle. Operational efficiency is crucial for corporate innovation and competitiveness.

Driscoll's' expansion business model, partnering with Reiter family producers, emphasizes the need to distribute investment expansion endeavors, promote increased growth and demonstrate investment efficiency (it is doubtful that such growth would be possible without this strategy, or if it were supported only in Group investment). Through collaboration and

investment effort, Driscoll's can effectively use resources, minimize expenses and achieve efficiency. This approach aligns with operational motivations that value efficiency and resource exploitation for business model innovation.

Strategic choices around water management, operational efficiency and collaborative investment by Driscoll's demonstrate how operational pressures and adaptability affect business model innovation. This research shows how operational issues affect business model performance and adaptability in the ever-changing agricultural industry.

The "*Reiter Family*" effect, which fosters the culture of family, community and shared goals, boosts Driscoll's' welcome everywhere. This family approach attracts great talent and creates a workplace culture that goes beyond typical employment relations. Driscoll's builds a strong internal workforce and promotes itself (and its farmer partners) as a desired employer by establishing a sense of inclusiveness, minimizing both labor and skill shortages.

Community involvement and the "*Reiter Family*" impact Driscoll's cultural approach, strengthening its position as a socially responsible and sustainable agricultural stakeholder and allowing a more conservative expansion strategy.

- External drivers

The Driscoll's case strongly supports the external influences identified in business model innovation previous research. Private water management collaboration shows regulatory efficiency commitment. By working with other farmers, partners, organizations, governmental institutions and municipalities on water management, Driscoll's increases environmental standards and efficiency (Bock et al., 2012). Strategic engagement with external partners shows how firms may assist regulatory settings to innovate in sustainable practices.

Furthermore, Driscoll's commitment to water, pesticide, fertilizer and waste management issues displays a strong sense of collective social responsibility. The company's proactive management of these critical areas meets legal requirements and promotes environmental stewardship, ethical behavior, social responsibility and sustainable business practices.

Berry cultivation is labor-intensive and requires both low and high-skilled workers. However, Driscoll's overcome any potential difficulty that might arise from this because its production partnerships increase recruiting flexibility. Labor market dynamics is crucial on fostering business model innovation – it teased corporation to manage production with a differentiated model.

These external motivators are also illustrated by the Reiter family's community and social involvement. Beyond business, the family contributes to the society and adheres to the requirements of corporate social responsibility.

The Driscoll's case corroborates how private partnerships, social responsibility, labor dynamics and community engagement shape business model innovation. These factors show a holistic approach that goes beyond operational efficiency, improving the agribusiness model's long-term sustainability and adaptability.

- Risk management

Often under looked in previous research, risk management guides Driscoll's resilience and sustainability efforts, arising as a catalyst of business model innovation.

Driscoll's is expanding globally by partnering with local farmers and assumes that the motivation is to manage risks (more than outsourcing). This strategy is perceived as reduces global growth risks. Externalizing manufacturing helps Driscoll's reduce the investment risks of starting businesses in new locations. By working with local farmers, it is able to learn about local peculiarities and reduce "local knowledge risk". In labor-intensive agriculture, Driscoll's reduces talent shortage risk by using local knowledge and network to a more effective talent acquisition method via partnerships.

Water management is crucial to agriculture's sustainability and risk mitigation. Driscoll's actively manages water resources to reduce operational risks from changing water availability, crop health risks and consumer perception hazards. Driscoll's wholehearted effort to improve its business model against uncertainties is shown via water management concerns.

Through proactive risk avoidance and mitigation, Driscoll's develops its agribusiness position and defines itself as a forward-thinking firm that accepts challenges as opportunities for inventive solutions in a dynamic global market.

- Sustainability

Driscoll's business model innovation prioritizes environmental and social sustainability. This decision shows the company's ethical commitment and promotes sustainability as an innovation driver.

Driscoll's creative approach is based on constant client listening to satisfy its deliberate commitment to understanding customer preferences, aspirations and beliefs. Driscoll's gains comprehensive insights into quality-boosting opportunities by proactive client involvement,

which increases customer value and reduces waste. This discourse improves operational efficiency:

"[2 years ago] we were grading the fruits against 8 or 9 appearance defects for every single berry [which were not valued in the marketplace] so you can imagine how much fruit was being left out in the field (…) so we reassessed and reduced dramatically the number of appearance defects."

Brie Reiter Smith, Food Tank, 2021

Actively listening to customers helps Driscoll's stand out. Based on customer input, Driscoll's optimizes its goods and adapts to changing tastes. By focusing on fruit quality and client preferences, Driscoll's improves how consumers view their fruit and this boosts their position as an industry leader that satisfies more sustainable market expectations.

Via changes to their business strategy, Driscoll's also prioritized addressing consumer sustainability issues, particularly by developing measures to decrease its carbon footprint and minimize its environmental effect. Environmental sustainability is greatly impacted by consumer listening and Driscoll's' concern with consumer values enables it to make educated decisions regarding resources, packaging and distribution. Optimizing these operational areas increases the company's environmental sustainability and meets consumers' growing eco-friendly expectations. More than meeting customer sustainability concerns, Driscoll's perceives environment and people as key elements of their operation. Healthy environment and the sense of community is part of corporative success.

"We had, and still have, competitors that replicate our partnership model and make contracts with local growers. Usually, they are not as successful as Driscoll's is. And this is just because they only have formal contracts with them. They don't have the sense of community as we have. And this makes all the difference."

Driscoll's field visit

Business model innovation is driven by Driscoll's' commitment to environmental and social sustainability (Reiter Family culture). Driscoll's' ability to combine customer-centricity,

operational efficiency\ environmental responsibility makes them more than a fruit provider; it establishes them as a global leader in sustainable, customer-focused agribusiness.

4.2.8 Conclusion

The Driscoll's case serves as an example to illustrate the various factors that motivate and drive business model innovation. These factors involve: Strategic drivers, such as entering new markets, creating new value propositions, generating new revenue streams, leveraging new technologies and targeting new customer segments; Organizational drivers such as leadership changes, cultural shifts and the introduction of new products and systems; and finally, External drivers (which we perceive them as motivators) such as changes in governmental regulations, customer expectations and customer needs. These drivers are often mentioned in the literature, as referred in *Chapter 2 - Systematic Literature Review*. While our analysis acknowledges these established drivers, it also introduces the concept of motivators that precede and influence them.

This case revealed that besides profit, primary incentives (motivators) for business model innovation are risk management (avoid, mitigate and controlling risks) and enhancing sustainability concerns (not only as create value because it is perceived and value by the customer, but also because it is fundamentally a concern to avoid depletion of resources, essential for productive survival.

While profitability as a motivator for innovation has been extensively explored in previous literature, our study identifies risk management and sustainability as additional motivators that lead to business model innovation.

External drivers, as extrinsic factors and not a "*a planned effort to achieve something*", as driver is defined (Miller and Brown, 2013), we opted to classify them as motivators, even not being an internal willingness, but extrinsic factor.

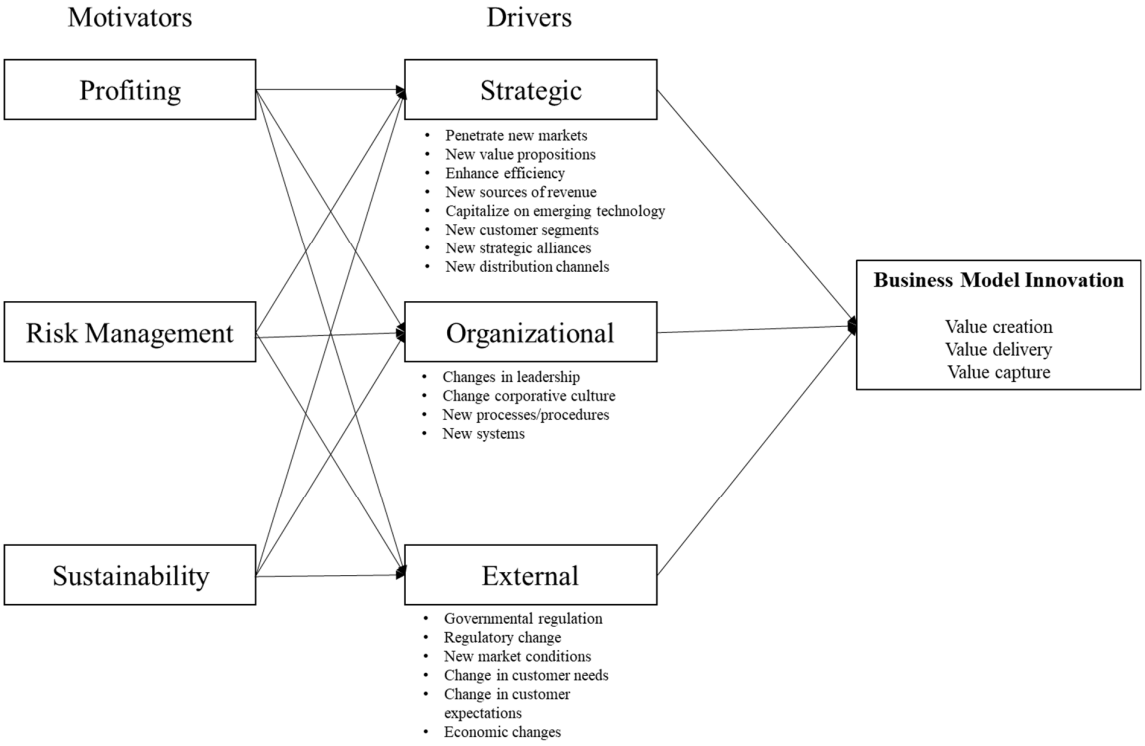

Figure 4.7 - Drivers and Motivators of Business Model Innovation Conceptual Framework

Source: Own creation based on Driscoll's Case interviews, field visit and archival data

These motivators act as teasers, prompting organizations to reevaluate their existing models and explore new avenues for value creation and delivery. By incorporating these motivators into our framework, we aim to provide a comprehensive understanding of the forces that propel businesses towards innovative transformations in their business models.

In a dynamic and ever-evolving environment, Driscoll's has redefined industry standards through a combination of external partnerships and internal innovations, particularly through significant investments in R&D. This study's main findings underscore Driscoll's focus on enabling its growth and conquer new markets through partnerships, listening to customers and creating customer value, which is central to its business model innovation. Driven by strategic values, Driscoll's aims to foster sales, leverage the networking effect, explore new markets and enhance negotiating power. Operational drivers are also pivotal, as the company strives to boost operational agility and investment efficiency.

External factors such as regulatory compliance, social responsibility, recruitment ability and community involvement further shape Driscoll's business model. Moreover, risk

management emerges as a critical driver, encompassing risk avoidance, investment risk transference, recruitment risk transference

Sustainability is another cornerstone of Driscoll's approach and a motivator for business model innovation, addressing customer social concerns, water and food waste management, carbon footprint reduction, environmental protection and operational sustainability.

Ultimately, Driscoll's demonstrates a holistic and forward-thinking approach to business model innovation, balancing strategic, operational, with a robust emphasis on motivators as creating economic value, risk management, sustainability and external motivators. This multifaceted strategy not only supports the company's growth and competitiveness but also positions it as a leader in responsible and innovative agribusiness practices.

[This page is deliberately left blank]

4.3 SP&F Case Study

SP&F case was selected as a corporation playing in a moderate dynamic market (ornamental plants and peas), with no major external volatility, moderate technological changes or market and regulatory conditions. It is also an illustration of a corporation with a moderate dynamic role, not implementing disruptive changes to its market or industry.

4.3.1 The Corporation

SP&F is a B2B family business with roots in over 100 years and 4 generations of agricultural exploration and it is an example of the commitment, adaptation and dedication of the Sousa Prado family.

The company located in Portugal is nowadays the result of a troubled period in the last 5 decades that forced the family and the company to adapt to the current situation. A deeply traditional company in terms of production and management processes, followed by more than 2 decades with most of the property (land and storage facilities) and assets nationalized by the Portuguese State as a consequence of the 25th of April 1974 revolution. It was reborn in the beginning of the years 2000.

In 1970, just shortly before the revolution period, the property (with 1000 ha) was inserted in an irrigation perimeter of the region Mira with a distribution water system with origin in the Santa Clara dawn. This milestone was relevant as it would boost the region in terms of agriculture with more access to water during all year which made the owner of the land at the time to make more infrastructure investments (allowing irrigated cultures) that ended to be nationalized shortly after the revolution.

Before the revolution, the company was dedicated to the traditional production of maize (corn for animal feeding), wheat and rice to supply the local market - an agricultural cooperative. In the meantime and as a complementary activity, livestock and dairy farming was introduced, an activity that required intensive labor. Many local families lived in and from the property at the time. Many local people were born in the property.

With the political revolution, 90% of the land and storage facilities were nationalized. The farming family business was put on hold and the land was rented by the Portuguese State to tenants that come from the ex-Portuguese colonies.

It was only after 2 decades that two resolute siblings, determined to recover their assets (and after some national laws that allowed it), began to recover nationalized lands from some tenants who had abandoned the lands or were in breach of contracts.

The recovery process, in 1988, began the formal resumption of SP&F. By 2002, the family had recovered most of its land and formally created the company SP&F, beginning to reassume and explore 500 hectares of land. The formal creation of the company was not just a financial investment, it was the family's determination to re-structure its agricultural legacy and have a social, environmental and economical contribution to the region.

The rebirth of the company was marked by the intention to professionalize production processes and management. The objective was to maximize the importance and robustness of the farm by investing in a balance of environmental, social and economic sustainability, focusing on the balance of the ecosystem, responding to what the market demands and adjusting to the social balance of the community.

The decision to start investing in the exploration of peas and ornamental plants at this stage in its history was a consequence of the company's understanding of market opportunities, customer preferences and the company's ability to adapt and be agile. Its dedication to regaining their property, improving operations and maximizing farm size is a fusion of tradition and modernity, establishing the corporation as a relevant presence in agricultural sector.

In 2010, an important event in the company's history happened when one of the founder's sons assumed leadership after his father suffered medical episode. The next generation of managers with high education and international management experience was part of the management professionalization target.

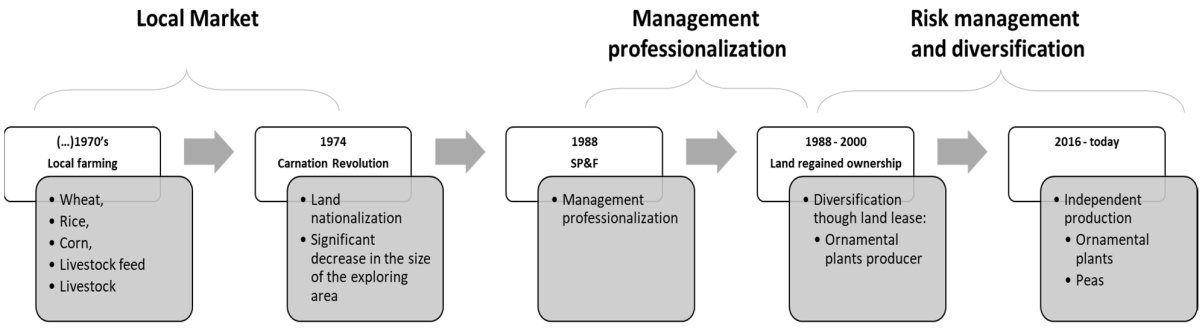

Figure 4.8 - SP&F Evolution

Source: Own creation based on SP&F interviews

In 2022, SP&F had more than 2 M€ turnover with 85% of the production being exported to the Netherlands, France, Denmark and Ireland.

The corporation operates with 50 employees (full time and with permanent labor contract) and can achieve 120 people at peak times with seasonal contracts. SP&F integrates permanently a multicultural team from Bangladesh, Nepal, Ukraine, Bulgaria, Germany and Portugal.

SP&F pointed out as the main current challenges the hydric resilience, the integration of immigrant labor force, attracting higher skilled labor, the steady increase of labor costs (that will lead to higher pressure on efficiency), the production of renewable energy, the instability of international markets, digitalization, the sustainable strategy in terms of environment, social and economics and re-designing the ecosystems in the property to assure more biodiversity and resilience to climate change.

4.3.2 Adapting and Introducing New Products

The family started implementing reforms by introducing methods focused on risk management. The land exploration re-started from a small plot and steady growth to occupying the entire farm. SP&F, responsible for managing around 500 hectares of agricultural land, encountered a significant obstacle in the form of acacia invasion. These acacias were first placed in the 1970s to provide wind protection. The company noticed the invasion of acacias on land was not being controlled and realized that they needed to occupy the land that was not being explored (non-productive spots), cleaning it and introducing productive crops. There was a clear decision not to abandon (or reassume exploration) plots of land in order to avoid the invasion of acacias and protect all the other crops in the farm.

In order to deal with this challenge and with a strategic vision of risk management, it decided to follow a strategy of diversifying sources of income, deciding to rent part of its land to neighboring companies. These plots of land, which were initially exploited by neighbor farms, began to produce carrots and ornamental plants.

This step not only dealt with the immediate danger of the invasion of acacias but also coincided with the company's more ambitious objectives of optimizing land use and reducing operational risks. At this stage, the company demonstrated its flexibility and agility, diversifying land use and ensuring long-term sustainability and profitability in its agricultural operation.

Thus, leasing land to other farmers was part of a planned strategy for resource management and creating new sources of income.

However, challenges continued to happen, especially due to the dairy market. The unpredictability of milk prices and the fact that it is a very labor-intensive activity, was causing real (and sometimes actual) risks of financial problems, where milk revenue did not cover all costs. The corporation started to diminish and phase out this business line.

SP&F's response to this challenge, besides leasing land to other farmers was partnering and establishing agreements with tenants like Silver Queen, who specialized in ornamental plants and eucalyptus branches.

In 2016, Silver Queen made the decision to divest the company's businesses operation. SP&F saw a chance to expand and keep diversifying its business activities this year. The lessee had the expertise, the roster of customers and the skilled staff that would enable SP&F to start a new business area with (controlled) manageable risks. Consequently, the corporation acquired the operation from Silver Queen and shifted part of its focus to the cultivation of ornamental plants, eventually diminishing the production of maize, that was at that time the main production.

The implementation of this strategic choice, together with alterations in the operations' management, resulted in a notable improvement in the company's financial performance.

"In 3 years, we could triple the production and sales from the former tenant."

SP&F Partner and CEO

To fulfill the production of ornamental plants, it was necessary to rebuild client connections, establish work teams and address the demands of new customers. These issues posed an additional obstacle to the conventional structure of the organization.

Additional issues emerged, namely about strategies to guarantee the long-term viability of soil and water quality, as well as methods to achieve consistent harvests throughout the year.

Contrary to other crops that are replanted annually, ornamental plants have a longer lifetime and need strategies to prevent soil overexploitation and maintain consistent fertility. While not an instant solution, it was imperative to implement crop rotation in order to maintain the soil's health and fertility. This included rotating many crops. This issue posed a significant environmental threat, together with the goal for maximizing efficiency.

Peas, as a summer crop, were crucial in the implementation of crop rotation and soil rejuvenation strategies. By alternating the cultivation of peas with winter crops like maize (corn), it is possible to consistently replenish essential minerals in the soil, therefore minimizing

soil depletion. Additionally, this practice enables the cultivation of crops throughout the year, (peas in Summer and maize during the Winter months).

SP&F places great significance on ensuring biological preservation and preserving seasonal balance, since it has a direct impact on soil productivity and crop yields. The firm prioritizes sustainable land exploration approaches, which aim to save the soil and biodiversity, while also maintaining the long-term viability of its agricultural operations.

SP&F adeptly addresses the difficulties associated with cultivating ornamental plants via the use of smart crop rotation and conscientious land management procedures. The firm prioritizes environmental sustainability and agricultural resiliency.

Through market opportunities, new partnerships were formed with pea production companies, including the wholesaler GreenPeas in Denmark, signaling a new phase of diversification.

Diversification was perceived as necessary as it was understood that exploration of few products was not financially sustainable and it was risky. The family decided to adopt a more balanced approach to land use due to the significant risks associated with leases. They practiced crop rotation by growing corn during the Summer and peas in the Winter to promote biological equilibrium and seasonal variation.

In its initial partnership commitment with GreenPeas, SP&F was responsible for land ownership, plantation and production and GreenPeas was responsible of harvesting. Soon, SP&F began to notice that only the highest quality peas (1st choice) were being picked, resulting in a significant amount of food waste and poor financial performance. Due to its superior understanding (gained know-how) and extensive connections in the industry, they chose not to renew their partnership with GreenPeas. Instead, they took on the responsibility of not only producing, but also harvesting and commercialize their products directly to Danish wholesaler partners.

In 2018, SP&F ended its agreement with GreenPeas to take full control of the production process and ensure profitability by managing both production and harvesting internally. This action showcases the company's dedication to ongoing enhancement, flexibility and environmental responsibility.

More recently, new challenges arose, such as the ongoing problem of labor scarcity, particularly during peak harvest times.

Also, environmental concerns are more and more a concern for SP&F. It sought external cooperation from universities including the Faculdade de Ciências (Faculty of Sciences) and

the Faculdade de Agronomia (Faculty of Agronomy) at Lisbon University, due to the importance of technical expertise in diseases, fungus and climate management. Soil health, specifically focusing on fungal issues in peas, became a priority, requiring cooperation with agricultural microbiologists.

Through these partnerships, the company has gained vital knowledge about plants that require less water and are better suited to sandy soils.

The company recently is planning to embark on a reforestation project using native plants such as rosemary and lavender, driven by the concern of environmental protection and biodiversity. This approach has the dual goal of not only restoring the ecological balance of the land, but also creating a new forest architecture that would enhance biodiversity and promote ecosystem resilience. With these and other strategies, the company is demonstrating its intention to adopt sustainable land management methods and environmental responsibility by converting damaged lands into thriving ecosystems.

4.3.3 Analysis

In this analysis, we explore the business model innovation that SP&F has driven through product diversification and partnerships as a way to create value to the customer, deliver and capture a share of that value.

Through a thematic analysis one could identify drivers and motivators to the corporation innovation of its business model and understand (if any) the exploration of lean approaches, agility and new product developments.

4.3.3.1 Thematic analysis

The thematic analysis conducted was based on the method described by Braun and Clarke (2006) and Saldaña (2021). Using this thematic analysis method, we aimed to systematically detect and interpret common response patterns and themes in the interviews. The interviews were transcribed. In order to organize and categorize the data into patterns and themes, a coding tree was created, as suggested by Saldaña (2021). This method supported the structuring of the investigation.

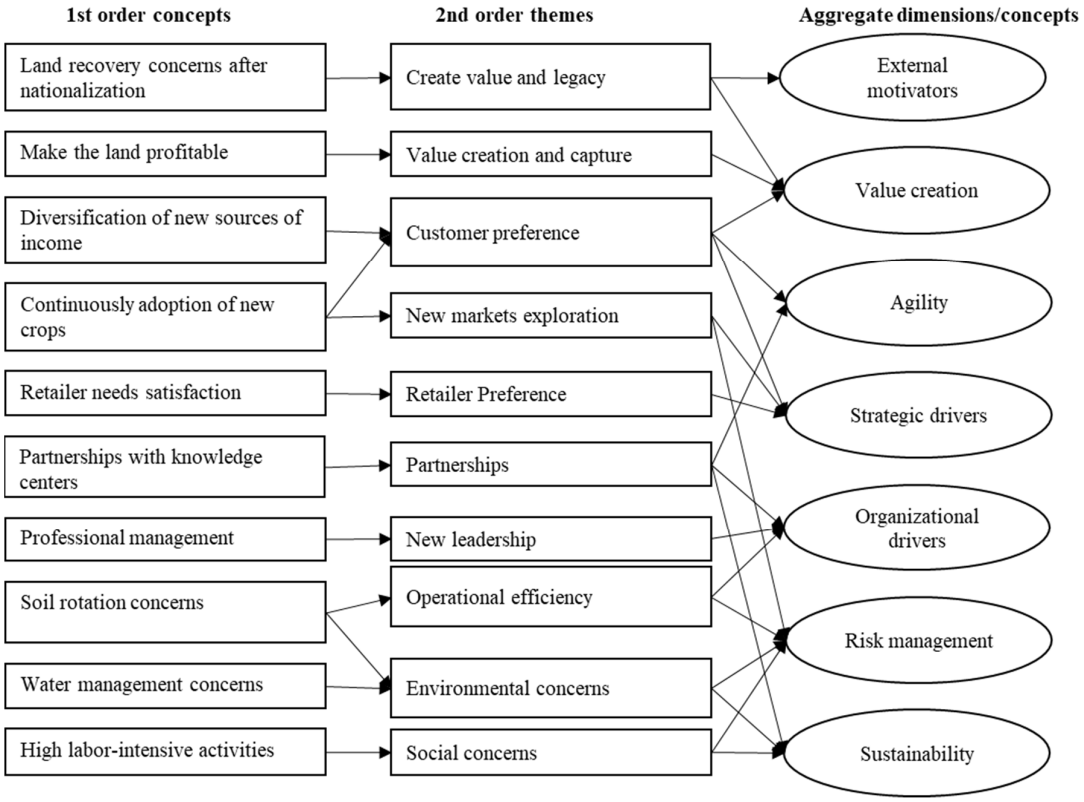

Figure 4.9 - SP&F Coding Tree

Source: Own creation based on SP&F Case interviews and archival data

- External motivators

The recovery of land post-nationalization served as a significant external motivator for SP&F to innovate their business model. This pivotal moment spurred the family to reclaim their heritage and the legacy, enhance the land's value and ensure its profitability. By focusing on strategic diversification, sustainable practices and professional management, SP&F transformed their operations to not only revive the land but also honor their legacy and create lasting value. This external pressure was instrumental in driving the company's commitment to continuous improvement and sustainable growth in the agricultural sector.

- Value creation

One could identify the SP&F focus on value creation on conducting their daily activities. This could be perceived on their routine and introducing new products, but pretty much on their effort of recovering the nationalized land (the family perceive it as creating value and preserving family legacy).

SP&F focus on making the land financially sustainable through product diversification and introducing new sources of income (creation and capturing value).

"*We need to diversify because we need to avoid being dependent on one or two clients or one market that can have considerable fluctuations […] only 1 crop is not enough for our size. […also…] we had to make culture rotations."*

SP&F Administrative Partner

The introduction of new crops has revealed the intention and alignment with customer (final customer and retailers) preferences, reveling the corporative interest and commitment to meet the customer needs, delivering value to the client.

- Agility

As a smaller corporation one could perceive during interviews the agility of the corporation reacting the environmental conditions (external conditions), as land nationalization recovery or market prices fluctuations (dairy) and the proactivity on making profit through crop diversification and introducing new sources of income.

The new product introduction has the focus on meeting client preferences and showcases its adaptability to market conditions (flexibility).

Even as a corporation of this size, SP&F has a continuous focus on setting partnerships with other growers and knowledge centers (as universities), focusing their proactive approach and adaptability to identify the best crops to introduce, to preserve the ecosystem (leaning process).

The corporation agility enabled SP&F to innovate, to respond to market condition and to respond to sustainability concerns.

- Strategic drivers

SP&F focuses on new markets exploration and intention to meet demand requirements, obtaining value. By making the land profitable, diversifying and search for new sources of income illustrate the SP&F efforts of value creation, delivery and capture. The strategic approach intends to maximize profitability but also intends to protect the corporation to market fluctuation (as dairy prices fluctuations) and ensures the resilience of the corporation.

The adoption of new crops to align customer preferences intends to support its commitment with client satisfaction and market moderate dynamics.

The strategic drivers allowed SP&F to maintain the competitive edge, ensuring growth and long-term sustainability reinforcing its position in the agricultural sector.

- Organizational drivers

Organizational drivers played a key role on SP&F steady growth illustrated by the establishment of partnerships for knowledge acquisition.

Also, the leadership changes played a pivotal role in innovation the business model. Implementing professional management, introducing new vision and capability to introduce in the corporation advanced professional practices, with high-educated, high-skilled, with international experience managers has been crucial. The change in leadership also allowed the necessary agility to market and the implementation of lean approaches.

New leaders allowed SP&F to become and remain competitive and improve operations and sustainability.

"It is necessary to implement more sustainable agriculture. With more precision. Precision technology allows to have more efficient and precise [less quantity] use of phytopharmaceuticals, fertilizers and water. And this has direct impact on costs and efficiency."

SP&F Administrative Partner

As a result, the corporation keeps its competitiveness achieving its steady success as a relevant agribusiness player.

- Risk Management

A common pattern among interviewees was the concern on risk management: operational, environmental and financial risks. Strategic decisions and innovation on the business models were always referred aligned with risk avoidance or mitigation concern. This concern is illustrated in the introduction of new cultures, in which, besides all drivers referred, there is an intention to manage market risk (with diversification) and operational risk (as soil rotation for soil health, natural fertilization and productivity), seasonality risk (introducing seasonal crops), resources scarcity risk (soil and water) and labor shortage risk (avoid activities more labor-intensive and good welcoming and live quality practices and training).

"This is an activity that to operate, we need people. Of course, in peak times we need more people, but it is not of our interest to have different people every year. It is of our interest to have the same people every year. We want to keep people here that fells welcome, identifies with the company and with its culture."

SP&F Partner and CEO

The risk management procedures intend to save corporation operations against potential hazards and threats, but also improves resilience and adaptability.

- Sustainability

Sustainability is a relevant motivator for SP&F to operate and innovate their business model. This is perceived in its effort for not only maintain but improve the environmental ecosystem. The first interest on establishing partnerships with knowledge centers focus on the interest to preserve and improve the environment (ecological islands/corridors, enhancing biodiversity, research and reintroduction of native plants - indigenous plants), among others.

"We need technical knowledge. Diseases, fungus, clime, monitoring procedures. For instance, for peas, the fungi are in the soil. We need to focus on soil health. It is too much for us to do it internally. We need the help [knowledge] from universities."

SP&F Administrative Partner

Other measures illustrate corporative commitment with sustainability to create value, like the introduction of electric (and other non-carbonic fuel) vehicles and equipment. It underscores SP&F commitment on reduce the carbon emissions. Or the combat of the soil erosion with the introduction of new crops specially designed for protection, soil fertilization and water management.

The welcoming measures of migrants, training (besides technical – but personal skills for international employees), supportive and inclusive work environment also highlight the social responsibility of the corporation, creating value through social sustainability.

4.3.4 Conclusion

The analysis of SP&F's business model innovation reveals a strategic approach driven by several key aggregated concepts: external motivators, value creation, agility, strategic drivers,

organizational drivers, risk management and sustainability. These elements collectively underpin the company's successful adaptation and growth in the agribusiness sector. External motivators as the land nationalization and its recovery were pivotal to motivate the corporation to innovate its business model. Value creation has been central to SP&F's strategy, beginning with the recovery of nationalized land to restore family legacy and create financial viability. This effort extended to making the land profitable through diversification into new income sources and meeting market demands by continuously adopting new crops.

These initiatives illustrate the business's commitment to collecting and delivering value to its customers.

Agility proved to be crucial for the success of SP&F. The company's adaptability, learning process and agility are shown by its ability to swiftly adapt to changing market circumstances, as seen by the timely introduction of new crops and alignment with customers preferences. SP&F's commitment to innovation and environmental preservation is further shown by its partnerships with other farmers and knowledge centers such as universities. The business model of SP&F is significantly influenced by strategic variables. The firm demonstrates its strategic vision by its ongoing efforts to diversify its income streams and explore new markets, with the aim of aligning with demand and achieving higher profit margins. These activities ensure that SP&F remains robust and competitive in the face of market fluctuations.

The Organizational drivers is illustrated by the need of strategic partnerships and professional leadership and management. The introduction of highly skilled managers to the organization has enhanced its agility and fostered a creative mindset. Collaborating with other farmers and research knowledge centers has provided SP&F with advanced agricultural methods and essential knowledge, hence enhancing its competitive edge.

The primary focus of SP&F operations is mostly centered on risk management. The business employs strategic water management initiatives, soil rotation strategies and proactive new product searches to mitigate environmental risks. Addressing social concerns in labor-intensive activities ensures the establishment of stable and fair working conditions, hence enhancing the resilience of SP&F. The strategy used by SP&F explicitly integrates sustainability. Exemplifying their commitment to environmental care include initiatives aimed at preserving the natural ecosystem, transitioning to carbon-neutral vehicles and implementing crop cultivation to prevent erosion. SP&F demonstrates its dedication to long-term sustainability and community well-being via its focus on forming partnerships for innovative water management systems and social sustainability programs.

SP&F has successfully navigated challenges and seized opportunities by prioritizing value creation, agility, strategic initiatives, organizational excellence, risk management and sustainability. By using these integrated elements, SP&F ensures its continuous growth and a position as relevant player in the agricultural industry, so paving the way for a prosperous and thriving future.

4.4 Camposol Case Study

Camposol was selected as a corporation operating in a volatile and highly dynamic market, particularly in the transition from sown/planted grass to grass [2] matts. This market is characterized by rapid changes in technology and shifting customer preferences.

While the market itself experienced significant disruptions, Camposol played a moderate dynamic role. Its performance, while innovative and adaptive, did not cause major disruptions within the market. Instead, Camposol steadily adapted to changes, leveraging its strategic and operational strengths to navigate the evolving landscape and maintain a competitive edge.

4.4.1 The Corporation

Camposol is a leading European producer of vegetables and turf mats (grass). The corporation has a producing area of 1400 hectares, 650 hectare of dryland and 750 hectares of irrigated land (Camposol Managing Director interview), with approximately 400 hectares of lawn carpet production. The sandy soil and the mild Winters enable year-round cultivation. In addition to lawn, the firm manufactures root parsley (250 hectares), carrots (80 hectares), pumpkin (70 hectares), potato (50 hectares), celery (20 hectares), radish, (40 hectares), turnip (30 hectares) and sweet potato (20 hectares) (Camposol).

Camposol was established in 1992 with the specific goal of growing vegetables for the North European market in the Winter, guaranteeing a continuous supply for British consumers throughout the year.

In 1992, Peter Knight and Peter Waring founded Camposol with the goal of finding optimal farming conditions. Their objective was to provide fresh vegetables to the UK market during the Winter season, thereby necessitating the identification of an optimal location for year-round agricultural production. Enticed by a temperate climate, abundant water resources and optimal soil characteristics, they ultimately chose a plot of 45 hectares (initial land size) in Southern European coast after thorough research.

These natural conditions provided the optimal environment for cultivating crops throughout the Winter season and so, it was possible to consistently fulfill the UK clients like Marks & Spencer, even when (or mostly when the local supply chain was impacted by the North European cold weather). Another competitive advantage of this new location was the access to

[2] Grass, turf or lawn terms are used interchangeably

excellent quality and affordable water, that allow irrigation for crops all year round. The soil, sandy and well drained (efficient water drainage, hence minimizing waterlogging and promoting optimal root development), was considered optimal for cultures of fresh vegetables.

Over time, Camposol expanded its range of crops. The expansion involved growing parsnips, turnips, swede, radish, leeks, spinach and butternut squash. The corporation also started renting land, increasing its producing area to a remarkable 650 hectares. This strategic decision expanded the variety of crops and strengthened Camposol's position as a major player in the agribusiness sector.

4.4.2 The Business Model Innovation

Until the end of the years 1990s Camposol was a vegetable producer. There was always a focus on introducing new cultures to innovate and keep leadership in the market.

"The agriculture business has its own live cycle [for every product]. You start experimenting and investing, plant 1 hectare as an experiment and for some cultures you start making some money. You increase production to 100 hectares or more and you have to grow and conquer market very fast. If you are successful, your competitors start copying you and smashing margins. And your competitors will always have some competitive advantage – or because they are closer to the market, or because they are more efficient…and you have to phase-out and bet on another culture that you started testing meanwhile."

Camposol founder and former owner

In 1996, Camposol began turf matts cultivation by experimenting with a small 1,5-hectares plot. Camposol feels it was a timely bet, somehow unexpected.

A growing market appeared with the construction of the international exhibition, EXPO 98, located in Lisbon-Portugal. The turf for the exhibition gardening and green spaces was planned to be sow/planted and grow in-site (in the exhibition area).

Due to the endeavor dimension, this project would allow to train and show off the south European gardening clients how to use the new lawn matts and showed the benefits of this new lawn matts implementation (short time to have a nice lawn, good quality turf, no risk on the growing process, easy maintenance, easy to replace, etc.).

The professionals training and cultural change of this professional clients (gardeners corporations) allowed the increased demand for lawn and resulted in a quick expansion of their turf production, which now reaches 400 hectares (Camposol).

In urban settings, grass is a great ally for creating green spaces like gardens, public areas and football fields. Turf is recognized as bringing environmentally sustainable benefits, as the grass releases oxygen into the atmosphere while absorbing carbon dioxide; decreases pollutants by filtering dirt and gasses, cleaning the air; it will chill surrounds on a scorching summer's day and through its natural filtering properties, grass cleans the water that enters the root zone and lessens the erosion of soil.

Initially, at Camposol, lawn production used hand harvesting, but a year later it transitioned to using specialized machinery.

Lawn can be harvested year-round, for 52 weeks.

The sandy soil of Camposol is conducive to grass growing, promoting robust roots that facilitate easy establishment on customers' soil. In this business is it very important the production to market-fit: after growing, lawn can be kept in land, but every day in land and not sold, implies additional costs in water consumption, fertilizers, labor and land occupation.

"You have to manage stocks very well. More than 6 months in the fields and you lose money."

Camposol founder and former owner

Nowadays, Camposol is a well-regarded supplier of lawn matts, including for sportive purposes, serving golf fields and prestigious football clubs such as Real Madrid, Barcelona, Benfica and PSG.

Real Madrid CF (Madrid – Spain)	
Real Betis Balompié (Seville - Spain)	
Malaga Club de Fútbol (Malaga – Spain)	

Olympique Lyonnais (Lyon – France)	
Real Club Celta de Vigo (Vigo – Spain)	
Valencia Club de Fútbol (Valencia – Spain)	
Sevilla Fútbol Club (Seville – Spain)	
Association Sportive de Monaco Football Club (Monaco)	
Fortuna Dusseldorf (Dusseldorf – Germany)	
Lusitano de Évora (Évora – Portugal)	
Sport Lisboa e Benfica (Lisbon – Portugal)	
Sporting Club de Portugal (Lisbon – Portugal)	
Futebol Clube do Porto (Oporto – Portugal)	

Figure 4.10 - Camposol Lawn Main Customers

Source: Camposol website (2024b)

The company's success in this specialized market demonstrates its capacity to adapt and its dedication to providing top-notch products to well-known clients in the sports industry. Camposol's transition from focusing on vegetables to being a diversified agricultural leader showcases its endurance, strategic foresight and adeptness at seizing growing market prospects.

4.4.3 From Vegetables to Lawn Production

In the field of agribusiness, crops undergo a well-defined life cycle that starts with the introduction of new ideas or methods. At first, firms allocate resources towards research and development in order to launch new crops or enhance the quality of current ones. This stage

encompasses the exploration of agricultural techniques, pest management and harvesting methodologies. Upon achieving success, the organization proceeds to fully comprehend and perfect the manufacturing process, hence enhancing efficiency and quality. This level of expertise enables the potential to grow the size of operations, resulting in cost advantages due to greater output, ultimately improving profitability.

As the company's processes demonstrate efficacy and profitability, rivals take note and commence to imitate similar techniques and production. They often cultivate comparable agricultural products near proximity to important markets, so decreasing transportation expenses and perhaps providing more affordable rates. This replication results in an expansion of the market supply, which in turn leads to heightened competition, the products start to be commoditized and diminished profit margins for the original creators.

In order to mitigate the decline in profits, most corporations feel they are obligated to engage in ongoing innovation (introducing new products). This pursuit of innovation results in the creation of new goods, implementation of new agricultural species, or enhancements in current procedures. Through continuous innovation, organizations may distinguish their products or services from competitors, charge higher prices and maintain profitability.

The iterative process of innovating, achieving expertise, expanding operations and then innovating again is essential for ensuring long-term success and sustainability in the agriculture industry.

During the 1990s, Peter Waring (one of the Camposol founders) was already conducting experiments on grass cultivation in England. Nevertheless, they encountered substantial obstacles in collecting the grass as a result of poor weather. As a result, they contemplated the possibility of extending their exploration to Portugal, even though the market in that country (and in South Europe) was not yet completely formed (corporative gardening was not fully trained nor had the culture to use this product – sown/planted grass was more common). Unfazed by obstacles, they carried out an experiment on a 1,5 hectares area in Portugal.

Camposol saw a significant turning point when it was given with the possibility to participate in EXPO-98 in Lisbon. Prior to the global exhibition, construction projects were much delayed and one of the remaining tasks was the creation of gardens (sowing and growing the grass). Using conventional techniques, the process of sowing and growing grass typically takes about six months. To meet strict time constraints, the management of EXPO-98 initiated the procurement of grass matts from France, namely from Bordeaux. Nevertheless, the French

Winter posed challenges in fulfilling the necessary amount and maintaining the expected level of quality.

Camposol, who was previously involved in grass production experiments, was asked to provide part of the required lawn. Camposol was able to use its current expertise and increase its manufacturing capacity via this chance. In addition, it provided education (as well as French competitors) to gardeners and landscaping firms on the advantages of using pre-grown grass mats, including accelerated establishment, decreased likelihood of inadequate growth and shorter installation duration.

By undertaking this procedure, Camposol not only strengthened its position in the market but also improved its knowledge and made investments in the required equipment for producing lawn mats on a big scale. As a result, Camposol established itself as a prominent brand in the manufacturing of lawn mats, renowned for its reputation of superior goods and excellent services.

This significant conjuncture in Camposol's history showcased the company's capacity to adjust, create new ideas and take advantage of developing market prospects, solidifying its standing in the industry.

By the end of their third year, Camposol began getting solicitations to provide grass matts not only for condominiums, houses and public spaces, but also for football venues.

The corporation attributes the absence of replicability by competitors to several factors, namely high initial investments in equipment (specific for grass and not for other agricultural products – Camposol took advantage of the opportunity to fulfil initially high demand and invested in equipment like harvesting machinery) and high Marketing investments and knowledge.

Grass matts is perceived as a different business (compared to vegetable). Through the process of lawn manufacturing, the corporation has complete control, enabling it to establish prices rather than accepting prices set by others during negotiations.

This control is enhanced by a wide-ranging customer base, (currently consisting of about 1000 clients including condos, gardens, town halls, private residences and sportive stadiums), rather than depending on a limited number of clients.

"Turf is about Marketing and who works for supermarkets doesn't get this. This requires effort and a dedicated team. […] instead of 4 clients [supermarket chains], we have about 1000.

Football clients have the shortest margins, but are very relevant in terms of communication and brand awareness"

Camposol founder and former owner

The success of the lawn business is greatly dependent on the implementation of efficient marketing strategies. Although clients from sports arenas such as football and golf may have narrower profit margins and less reliable payment terms, they play a vital part in boosting the company's exposure and marketing endeavors. Engaging in fairs and trade shows and consistently being present on golf courses are crucial tactics, backed by a committed sales and marketing staff.

Contrary to conventional agriculture producers that mainly provide supermarket chains and lack marketing ability, the lawn industry requires advanced marketing and sales management. Moreover, the rising water expenses have led to a surge in the price of maintaining lawns, therefore distinguishing the lawn industry from conventional agricultural practices.

4.4.4 Keep Changing the Product

Although lawn manufacturing has been successful in innovating, Camposol has acknowledged the need for ongoing innovation and expansion by introducing new goods. The corporation recognized that while lawn manufacturing was flourishing, achieving long-term success required diversification. The executive committee recognized the need of regularly introducing new goods as an agribusiness, due to many compelling factors.

"We are always testing new cultures. We have about 16 crops. And we are always introducing new ones (and phasing out some) because we need soil rotation and we need to avoid the risk of markets volatility"

Camposol Managing Director

First and foremost, soil rotation played a vital role in preserving soil health and enhancing output. The introduction of new crops facilitated improved soil management and enhanced sustainability. Furthermore, the act of expanding the range of products contributed to reduce the impact of market fluctuations and the risks associated with seasonal variations. Camposol might enhance its ability to handle changes in demand and supply by diversifying its product portfolio and not depending primarily on one product.

Furthermore, the continuous introduction of new items was perceived as important to continue pursuit of diversity. Every new product undergoes an initial investment stage, during which the firm acquires expertise and investigates the market, followed by a subsequent period of expansion. Over time, rivals start imitating profitable items, often achieving higher efficiency or proximity to important markets, resulting in decreased profit margins and the need for new and differentiated products.

Consistent with this approach, the merger with BRAMKO Group, a Czech Republic-based corporation from Eastern Europe, presented fresh prospects. Camposol began producing and exporting parsley root in response to BRAMKO's identification of a market for it (Eastern Europe). This relationship demonstrated the company's dedication to innovation, guaranteeing ongoing expansion and market influence via diversification.

Figure 4.11 - Parsley Root
Source: field visit

4.4.5 Analysis

In analyzing a corporation operating with a moderate role in a high dynamic market, we examined the drivers and motivators of business model innovation. A notable business model

innovation introduced by the corporation was the shift from sown grass to production of lawn carpets, taking advantage of the disruption of lawn production industry.

Our analysis identified several key patterns driving this innovation. Initially, strategic drivers had significant importance. The executives emphasized the need of continuous diversification and growth. This strategic vision ensured the company's ability to withstand challenges and maintain its competitiveness via the development of new products and expansion into new markets. The key factors were organizational drivers. The corporation fostered an innovative and adaptable culture via internal processes. The successful implementation of innovative concepts such as lawn carpets primarily relies on substantial expenditures in research and development, as well as the acquisition of new knowledge and expertise.

The business innovation activities were significantly impacted by external variables. The firm took assertive measures to preserve its market position and ensure further growth considering changes in market rules, customer expectations, competitive relations and other market factors.

Sustainability motivators as healthy soil concerns and crop rotation and crop location management have played a crucial role on innovating business model and introduction of new crops.

The wide use of Lean principles is perceived as the attention to new markets (which allowed being prepared when the lawn market opportunity appeared) and the introduction of new cultures and products, experimenting with piloting in shorter plots and grow production capacity as the market acceptance is perceived and knowledge and experience is improved. Lean principles also allowed to reduced waste, increased efficiency and helped to simplify processes.

Agile principles of the organization were rather important and perceived along the research process. The company's flexibility enabled it to seize new opportunities and react quickly to changing conditions of the market.

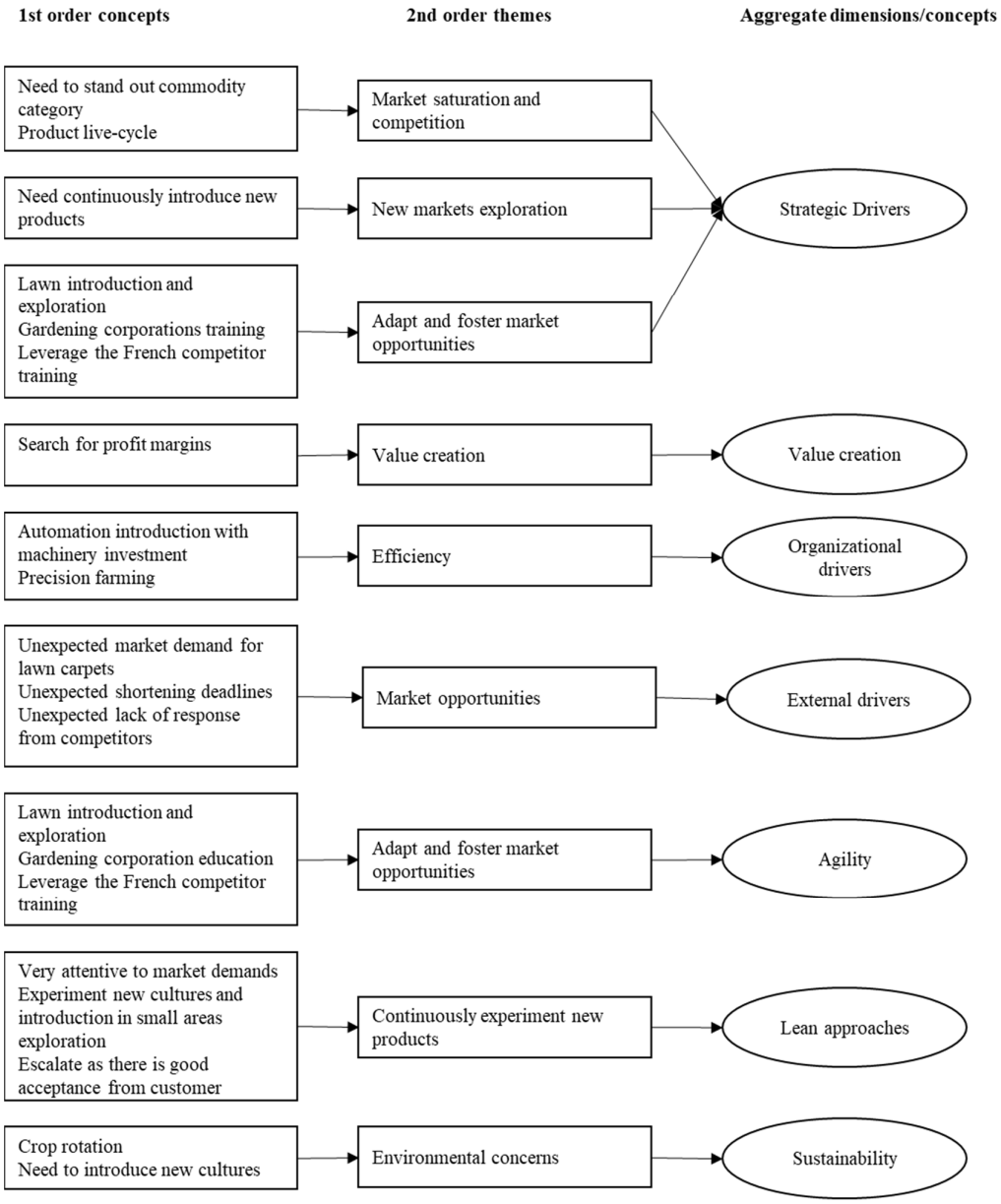

Figure 4.12 - Camposol Coding Tree

Source: Own creation based on Camposol Case interviews, field visit and archival data

We identified several strategic drivers behind the corporation's approach to business model innovation. Recognizing that agribusiness products often have short life cycles and quickly become commodities, the corporation felt compelled to innovate continually and introduce new products. This strategic drive not only led to the development of new products but also to the defeat of new markets. A prime example of this strategic innovation was the introduction of

lawn carpets, an innovation on the business model that capitalized on a relevant market opportunity.

Furthermore, the corporation maintained a constant focus on business model innovation as a mean of value creation, resulting in increased profitability. External drivers also played a significant role, as Camposol remained vigilant for market opportunities, provided support and training to corporate gardeners and adapted swiftly to supply gaps left by competitors, showcasing their agility.

Organizational drivers, including the innovation culture and leadership which allowed being open to innovation, installing state-of-the-art technology, equipment and precision farming methods were essential in driving new business models. These tactics not only enhanced productivity but also created barriers to entrance of new competitors (it made it difficult for competitors to replicate the same level of productivity).

There was a common pattern on what respects the identification of market fluctuations and agility to incorporate the reactions to that volatility - always experimenting with new crops and incorporating feedback from the market and consumers.

Camposol shown transversal concern with sustainability via innovative development of their corporate strategy, particularly in the areas of water management and crop rotation. In addition to fostering firm growth, this comprehensive approach ensured sustained profitability and prioritized environmental legacy.

4.4.6 Conclusion

The Camposol case illustrated its strategic adaptability and capacity for inventiveness within a dynamic environment (lawn market). Camposol first gained recognition for its original purpose of supplying Winter vegetables to the UK. However, it redefined its corporate strategy to align with market conditions and seize new opportunities, demonstrating agility.

From traditional lawn seeding (sown/planted grass) to the production of lawn carpets, this transformation demonstrates its ability to generate innovative concepts, resulting in significant enhancements in market visibility and profitability.

Camposol was driven to expand and explore new fields due to strategic factors, such as the need to counterbalance the short life cycles and commoditization of agricultural products.

Camposol's strategic technology investments, precision farming techniques and efficiency measures have enhanced its market position and posed challenges for competitors attempting to replicate its achievements.

Externally, Camposol demonstrated a high level of responsiveness and agility to market changes and conditions, effectively assisting corporate clients and taking action when competitors (French corporations) were unable to meet demand. The company's agility and proactivity have enabled it to effectively respond and generate new business opportunities. In addition, the company's dedication to ensuring long-term environmental and financial viability was reinforced via the use of sustainable practices such as crop rotation and water management.

Camposol's case study illustrates a firm that is highly motivated by innovation, strategic planning and sustainable practices. They are actively seeking and capitalizing on new market opportunities.

4.5 Cross-Case Analysis

The Cross-Case Analysis chapter is the last stage of our analysis into business model innovation in the agribusiness industry, supported by the framework developed by Ghezzi and Cavallo (2020).

Consistent with Eisenhardt's (1989) approach, a comparative analysis was performed using two distinct methodologies. The initial step involved analyzing and comparing the single case-studies Vitacress, Driscoll's, SP&F and Camposol to assess the differences between the two variables used in the theoretical sampling: (i) the degree of environmental dynamism, ranging from moderate to high and (ii) the role of the corporation in relation to this dynamism, whether it was imposed upon or determined by the corporation itself. Furthermore, the cases were analyzed by considering the first order codes, second order themes and, notably, overarching dimensions in order to detect any potential correspondence or discrepancy, possible pattern match or mismatch: this was operationally achieved by merging the coding trees of the four cases.

Using this paradigm, we have thoroughly analyzed four specific case studies, each reflecting a different combination of market dynamicity and internal organizational role.

These cases provide a diverse range of valuable insights, providing detailed views on how agribusiness firms successfully manage the complex challenges of their business environment. Our work explores the complex relationship between external market pressures and internal capabilities in business model innovation, taking into account different degrees of exposure to market dynamics and internal dynamics.

As we begin this cross-case study, our goal is to discover broad patterns, emerging themes and important insights that go beyond the borders of single cases.

We pretend systematically analyze the drivers and motivators of these case studies, playing in different external and internal scenarios to elaborate on how the corporations drive their innovation and adopt principles like Agility, Lean approaches and new product development (as identified in Ghezzi and Cavallo, 2020) and explore drivers not extensively explored in literature.

4.5.1 Environmental Dynamism and the Dynamic Role of the Corporation

The analysis of the cases Vitacress, Driscoll's, SP&F and Camposol considered the external dynamist of the market in which the corporation is operating and the dynamic role of the corporation.

As defined in *Chapter 3.3 Case Selection*, *Environmental dynamicity level,* or the external dynamicity of the market the corporation is operating refers to the degree of fluctuation, volatility and upheaval in the external environment in which a firm operates. This statement highlights the velocity and uncertainty associated with shifts in technological advancements, market conditions, customer requirements and regulatory landscapes. It quantifies the extent of activity in the surrounding environment that has an impact on a company's operations and strategy. High environmental dynamicity refers to a rapidly changing and unpredictable external environment, whereas low dynamicity indicates a stable and predictable environment.

The *Dynamic Role of the Firm* refers to the degree to which a corporation actively and substantially contributes to the disruption, transformation or reorganization of its industry. A business assumes a dynamic role by instigating substantial changes that amplify the volatility and instability inside its industry. When a corporation proactively modifies its business model, operational processes, or market strategy, it takes on a dynamic role. This active engagement becomes particularly evident when the company's advancements lead to disruptions within the industry or market. A low dynamic role implies that the business is inclined to conform to industry circumstances and respond to changes rather than taking the lead in initiating them.

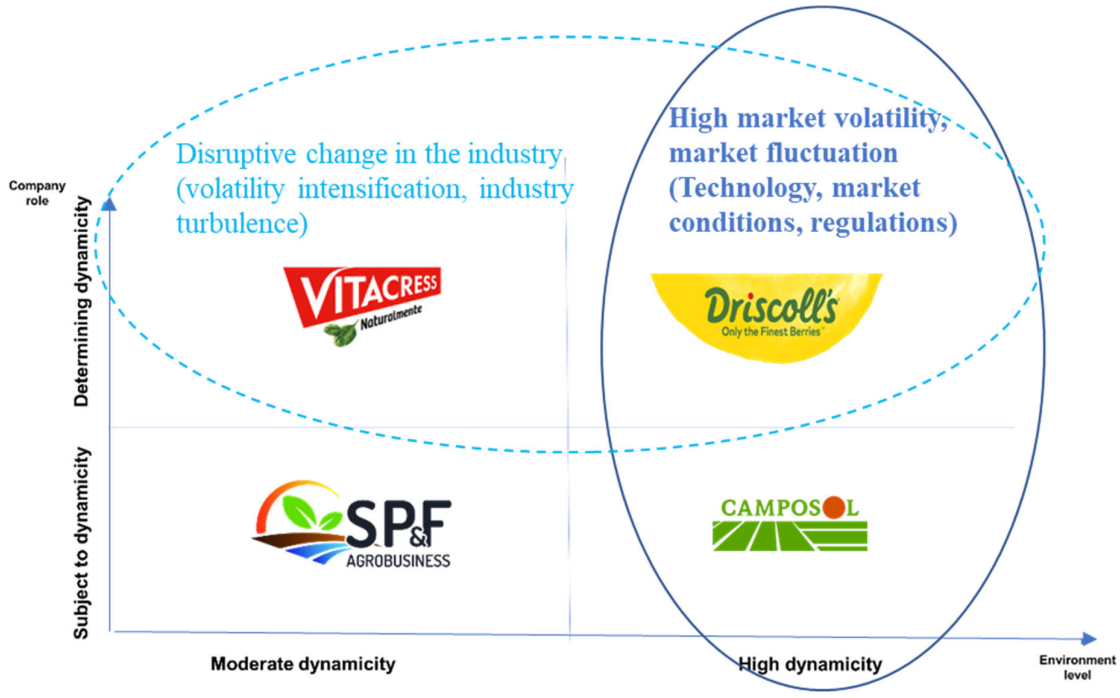

Figure 4.13 - The Four Companies Studied According to Ghezzi and Cavallo (2020) Framework

Source: Own creation

Vitacress works in a moderate dynamic market, mostly centered on lettuce and other perishable crops. Vitacress consistently revolutionizes industry norms and disrupts in innovative marketing and distribution strategies, even in the face of a traditionally solid market environment. Vitacress' proactive strategy enables it to gain and maintain a competitive advantage and drive industry growth, showing how internal dynamism can serve as a catalyst for change, even in a stable market.

Driscoll's works in a dynamic and ever-evolving market characterized by rapid technological advancements and demanding client expectations and requirements. Driscoll's plays a proactive and important role in the industry, implementing significant developments in supply chain management and technology integration to drive improvements. Through the use of a dynamic approach, Driscoll's successfully manages external unpredictability and positions itself as a pioneer in setting new benchmarks for the industry, as implementing new supply chains partnerships and new processes to deliver products. This highlights the significance of internal agility in a volatile setting.

SP&F, like Vitacress, operates in a moderately dynamic market that is focused on the vegetables production. SP&F has the ability to take initiative to innovate its business model, mostly responding to market conditions, nevertheless, it is not disruptive in the industry.

It prioritizes growth, driven by value creation, risk management and sustainability, positively reacting to market, making incremental changes, which allows the successful performance without creating relevant disruptions to the industry. SP&F emphasizes the need of agility, adaptability and effective responses to external changes for firms that operate in less dynamic markets.

Camposol operates in the lawn matts dynamic sector characterized by a disruptive and unexpected rising demand.

Similar to SP&F, Camposol generally adapts its business strategy in response to market conditions, incorporating developing new products with new know-how and technology, rather than aggressively leading industry volatility.

This strategy illustrates the ability of firms to efficiently navigate unpredictable situations in dynamic contexts by proactively adjusting their operations and products in response to external volatility.

Firms such as Vitacress and Driscoll, who proactively disrupt their markets/industries have a significant impact on how their industries operate; comparing with firms like SP&F and

Camposol, that exhibit a greater degree of responsiveness in modifying their strategies to accommodate external changes. The aforementioned difference emphasizes the diverse strategies that firms may choose to accomplish business model innovation, based on their internal adaptability and agility and the characteristics of their operational environment.

4.5.2 Cross-Coding Analysis

In order to perform a multi-case coding analysis, we analyzed the individual coding trees derived from four single case studies. The coding process for each case study was conducted with great attention to detail in order to find significant themes and patterns common and distinct to the cases under study (Eisenhardt, 1989; Yin, 2018) discovering both similarities and differences.

Through the analysis of the combined coding trees, we were able to get a comprehensive grasp of the overall themes, thus enhancing our research and yielding more profound insights into the phenomena being studied.

The research not only joined the coding trees but the content data from the 4 cases. We integrated the content data from all cases under investigation and redefined one unique coding tree. By integrating the data collected, we were able to systematically analyze the holistic components of the cases.

The cross-case analysis of Vitacress, Driscoll's, SP&F and Camposol revealed several main findings that illustrate how different levels of environmental dynamism and the dynamic roles of corporations may affect business model innovation in the agribusiness sector.

Firstly, the degree of environmental dynamism seems to impact the strategies developed for business model innovation.

In highly dynamic environments, such as those faced by Driscoll's and Camposol, companies must rapidly adapt to technological advancements and evolving consumer demands. These firms implement agile approaches and leverage technological innovations to remain competitive. Driscoll's, for example, reorganized its supply chain and integrated advanced technologies to manage the volatility of its market effectively.

Secondly, the dynamic role of the corporation plays a crucial role in determining the extent and nature of innovation. Companies that take on a proactive, dynamic role, such as Vitacress and Driscoll's, drive significant changes within their industries. Vitacress, despite operating in a moderately dynamic environment, continuously innovates in marketing and distribution, setting new industry standards.

This proactive approach highlights the importance of internal dynamism in fostering continuous improvement and maintaining a competitive advantage.

Conversely, firms with a moderate dynamic role, such as SP&F and Camposol, tend to focus on adaptability and incremental improvements rather than industry transformation. SP&F operates efficiently within a stable market by making small-scale enhancements and promptly responding to market conditions. Camposol, facing high environmental dynamism, adapts its business model to meet changing demands, demonstrating strategic adjustments without teasing significant industry disruptions.

The analysis also uncovered that risk management and sustainability are significant motivators of business model innovation across all case studies. These factors, not widely explored in literature, are prime motivators to the firms' strategic decisions, ensuring long-term profitability and resilience.

Vitacress, for example, employs sustainable farming practices and innovative knowledge partnerships to mitigate operational risks and assure healthy soil, available water and environmental conditions. Driscoll's commitment to reducing water consumption and promoting biodiversity reflects its strategic focus on sustainability, which enhances its competitive advantage.

Furthermore, the research found that companies with higher internal dynamism foster entrepreneurial cultures characterized by continuous improvement and innovation. These firms actively pursue proactively new opportunities and disrupt established norms, leading to substantial transformations within their sectors. This may suggest the use of lean principles (Ries, 2011) in these corporations.

In contrast, companies with lower internal dynamism prioritize practical problem-solving and efficient reactions to external changes, emphasizing adaptability and agility over proactive industry transformation.

Thus, the importance of agility - adapt to environment, flexibility, velocity, learning - was evident across the case studies. Firms that embrace agile approaches, such as rapid prototyping and iterative development, can quickly adapt to changing market conditions and customer requirements.

Driscoll's agile supply chain reorganization and Camposol's efficient resource allocation are prime examples of how these methodologies support business model innovation and maintain a competitive edge.

Lean principles, which focus on reducing waste and optimizing resources, enable companies to streamline processes and enhance customer value. It is evident the exploration of Ries loop in corporations like Vitacress (innovation funnel) and Driscoll's (R&D as core).

The cross-case analysis highlights the interplay between environmental dynamism and the dynamic role of the corporation in driving business model innovation. Firms that proactively engage in innovation, whether in stable or turbulent environments, tend to lead industry changes and set new standards. Conversely, companies that adapt to external conditions focus on stability and incremental improvements. Across all cases, risk management and sustainability emerge as crucial drivers of business model innovation, ensuring long-term success and resilience in the rapidly evolving agribusiness landscape.

4.5.3 Findings

By performing the cross-case analysis in agribusiness, we get a detailed knowledge of how distinct degrees of internal dynamism and distinct degrees of market dynamism may influence business model innovation.

Corporations with greater levels of internal dynamism (Vitacress and Driscoll's) often have a strong entrepreneurial culture and are always striving for continual development. This dynamic setting cultivates a culture that promotes the willingness to take risks, explore new ideas and engage in experimentation. This can be observed in innovation processes (eg. Vitacress innovation funnel or Driscoll's focus on R&D as core – internalized - activity). Employees in these corporations are given the authority to question established norms, investigate fresh concepts and propose significant changes. The entrepreneurial attitude is deeply rooted in the business, fostering a culture of innovation and adaptability in the face of obstacles.

On the other hand, firms that have lower levels of internal dynamism usually develop cultures that focus on being adaptable and agile. In such contexts, the emphasis is not on disruption or drastic alteration, but rather on effectively managing change with flexibility and adaptability. These businesses place a high emphasis on adaptability, productivity and practical resolution of problems. The corporations show the ability to quickly adjust to changing situations, use available resources effectively and enhance procedures to accomplish corporate objectives (eg. SP&F took business from a phasing-out tenant, as a way to deal with the decrease of income source and taking advantage of the know how – operational and market; or Camposol reacting to unexpected market demands for lawn matts). The culture of flexibility

fosters the capacity to deal with challenges and find creative solutions, enabling the business to navigate uncertainty and take advantage of new possibilities.

The connection between internal dynamics and corporate culture highlights the way the culture impacts the norms, values and behaviors in the workplace. Organizations that actively promote a high degree of internal dynamism foster a culture that encourages innovation and lean approaches, leading to increased competitiveness and long-term success. In contrast, businesses that have lower levels of internal dynamism place a higher importance on stability and efficiency. This leads to the development of cultures that promote flexibility and resilience, allowing them to succeed in unpredictable situations.

Furthermore, the cultural orientation of an organization may have relevant consequences on its strategic decisions and employee involvement. A company may achieve distinctive advantages and market leadership by fostering a robust entrepreneurial culture driven by internal dynamism. On the other hand, a culture that promotes the capacity to adjust and respond quickly allows firms to effectively handle complex situations and take advantage of new possibilities promptly and accurately. Understanding the complex relationship between internal dynamics and corporate culture is essential for agribusiness executives who want to create settings that promote innovation, adaptability and sustained success.

According to Ghezzi and Cavallo's framework (2020), agility and lean techniques play a crucial role in promoting business model innovation.

Agility, which refers to an organization's capacity to quickly react to changes in market dynamics and client demands, allows agribusinesses to promptly adjust their business models (Campanelli and Parreiras, 2015, Hallgren and Olhager, 2009). Organizations may effectively explore new ideas, improve current processes and adapt to volatile market trends by adopting agile approaches including fast prototyping, iterative development and cross-functional collaboration. This agility not only improves the organization's ability to innovate but also makes it easier to identify new value propositions and income sources.

Lean startup approaches, characterized by iterative development, rapid prototyping and a focus on customer feedback (Blank, 2013, Ries, 2011) were observed (in different degrees) across all the corporations studied in this research. However, their application seems to be much more intense and frequent in corporations with a high dynamic role. These companies actively reshape their industries, introducing significant changes that drive market volatility and turbulence.

Lean principles prioritize the efficient distribution of resources and the removal of waste (inefficiencies) in corporate operations. Agribusinesses may enhance their operations, minimize inefficiencies and maximize resources use by embracing lean concepts such as continuous improvement, value creation and customer focus. The adoption of a lean principles promotes a culture of innovation by motivating workers to identify and remove tasks that do not provide value, therefore reallocating resources for investment in new projects. Furthermore, it prioritizes a client-centric approach, guaranteeing that business model changes are in line with consumer preferences and market demand.

The case studies analyzed demonstrate the concern about of agility and lean thinking. For instance, Driscoll's' flexible supply chain reorganization allowed the organization to adapt to changes of customer tastes, requirements and market needs, hence fostering innovation in its business model. Camposol's efficient operational strategy enabled it to effectively allocate resources and fulfill new customer needs, enabling the company to adapt its business model to the changing market. Agribusiness firms may cultivate a culture of innovation, achieve ongoing improvement and adjust their business models to succeed in the dynamic business environment of today by integrating agility and lean concepts.

Vitacress, operating in a market characterized by stability, successfully used lean principles (as the implementation of the innovation funnel) to innovate within its specific market segment by optimizing its marketing and distribution processes. Despite the relatively stable nature of the fresh vegetable business, Vitacress's strong internal dynamic role enabled it to innovate and establish new benchmarks and new business models to the industry. The company's proactive strategy enabled ongoing improvement and ensured its competitive advantage.

Driscoll's operates in a volatile industry characterized by quick technical improvements and demanding client expectations. The company plays a highly dynamic role and often and intensely applies lean startup methodologies. The company's ability to quickly restructure its supply chain and incorporate cutting-edge technology indicates a strong dedication to ongoing innovation. Driscoll's utilizes lean principles to promptly adapt to market fluctuations, guaranteeing that its goods align with developing customer preferences and preserving its dominant position in the sector.

SP&F follows agile principles largely to maintain operational efficiency and effectively respond to incremental market shifts, given the less dynamic nature of the industry it plays in. Although SP&F is not as disruptive in implementing these strategies, its emphasis on gradual

enhancements guarantees its adaptability to changes in the environment and market, but with a more cautious approach compared to its more energetic competitors.

Camposol demonstrates the efficient use of agile methodologies to adjust to changing market demands in the lawn product industry, which is now seeing a rise in demand. The company's strategic adaptations to broaden its product portfolio and penetrate new markets demonstrate its capacity to use lean approaches for innovation and adaptation to evolving customer tastes.

The research suggests that all firms tend to use lean principles, but those with a high dynamic role do so more intensely and often. Their implementation is motivated by their constant desire to disrupt and reinvent industry norms, guaranteeing their position at the forefront of fiercely competitive and unpredictable marketplaces. This discovery highlights the crucial significance of lean principles in promoting business model innovation, especially for companies that actively change their sectors and drive market evolution.

[This page is deliberately left blank]

Chapter 5: Discussion

Through performing a cross-case analysis, we acquired a comprehensive understanding of the results that arose from the exploratory multiple case research (Eisenhardt, 1989). To provide a clear understanding of these complex findings and to further refine our propositions and research agenda, we constructed a comprehensive framework to categorize the results into several sets of variables, dimensions and principles examined in this study.

In our study, we build on Ghezzi and Cavallo (2020) research on initial stage digital startups: we not only investigated a new industry, specifically agribusiness, but also focused on incumbent and well-established corporations rather than startups and our goal was to explore how, why and to what extent these corporations in agribusiness can adopt innovative business models.

In order to derive valuable insights from our exploratory research for the benefit of theory, practice and society, we theoretically chose four case studies that would enhance the diversity of the cases. Unlike the original framework, which avoided the examination of a single corporation for each quadrant, as mentioned in the study:

"It is useful to note that the intersection of these two variables and their associated levels does not immediately lead to a 2×2 matrix, since the thresholds separating the different levels are blurred and, in the real-world, positioning can be to some extent fuzzy - and defining such thresholds lies outside the objectives of this study."

Ghezzi and Cavallo, 2020, p. 528

we opted to study more established and reputable corporations, operating in agribusiness but different markets, allowing us to identify one corporation for each quadrant. This approach greatly enriched our study. The first two elements of study were (i) the degree of environmental dynamism and (ii) the corporation role in determined dynamism.

Then, we included the three components of the business model innovation architecture suggested by Teece (2010) – value creation, delivery and capture. Next, we included the 8 overarching aspects that were identified from the inductive coding tree of the cross-case analysis: (1) *External motivator*, which refers to factors or influences that come from outside of a particular system or organization (Gassmann, et al., 2014; Chesbrough, 2010; Zott et al., 2011; Zott and Amit 2010). (2) *Sustainability*, which refers to the ability to maintain or improve

the value, particularly in relation to environmental, social aspects (Bocken and Geradts, 2020; Oliveira-Dias et al., 2022; Schaltegger et al., 2016; Evans et al., 2017; Geissdoerfer et al., 2018). (3) *Risk management* which involves identifying, avoid, transfer, mitigate cand control risks (Helfat and Raubitschek, 2018; Bolton and Hannon, 2016; Hock-Doepgen et al., 2021; Casadesus-Masanell and Zhu; 2013, Zott and Amit, 2008; Desyllas and Sako, 2013) (4) *Strategic drivers* which refers to the key factors or forces that shape and guide an corporation strategic decisions and actions (Osterwalder et al., 2005; Ujwary-Gil and Potoczek, 2020; Bigelow and Barney, 2021; Zott and Amit; 2010) (5) *Operational drivers* that refers to the factors that directly impact the day-to-day functioning and performance of a system or organization, like leadership and culture (Kafetzopoulos, 2021; Oliveira-Dias et al., 2022; Foss and Saebi, 2017). (6) *Lean principles* which refers to a set of strategies and practices aimed at minimizing waste and maximizing efficiency in a process or system and entrepreneurial posture of "*building, measure, learn loop*" (Ries, 2011; Bocken and Snihur, 2020; Blank, 2013; Hines et al., 2004; Womack and Jones, 1997). (7) *Agility* that is used to describe the ability of an individual, organization, or system to quickly adapt, being responsive, flexible and respond to environment dynamics (Cooper and Sommer, 2016; Qumer and Henderson-Sellers, 2006); Campanelli and Parreiras, 2015; Conboy and Fitzgerald, 2004).

5.1 Why and How Corporations Innovate their Business Model?

5.1.1 State of the art

After the systematic literature review, it was possible to propose a new framework that allowed to organize and systematize our findings. Through the analysis of a sample consisting of 319 articles from top tier peer review journals, we have obtained valuable insights into the fundamental structure of business model innovation. This encompasses a comprehension of the drivers and motivators that lead organizations to innovate in their business models and how they do it.

Corporations innovate their business model, as explained by Teece (2010), defined as the way they create economic value by creating, delivering and capturing value. This motivation is supported by several studies, including those conducted by Teece (2010), Markides (2006), Wu et al. (2010), Desyllas and Sako (2013), Bohnsack et al. (2014), Snihur et al. (2018), Bocken

and Snihur (2020), Bohnsack et al. (2021), Chang and Matsumoto (2022) and Cozzolino and Verona (2022).

Nevertheless, and even not widely researched some scholars have analyzed how risk management influences corporate innovation in their business models, despite the economic value it generates (Helfat and Raubitschek, 2018; Bolton and Hannon, 2016; Hock-Doepgen et al., 2021; Casadesus-Masanell and Zhu, 2013; Zott and Amit, 2008; Desyllas and Sako, 2013). Scholars generally agree that implementing risk management practices allows firms to improve their ability to withstand challenges, strengthen their organizational culture and increase their operational efficiency. Additionally, risk management practices aid in decision-making, instill confidence in stakeholders, ensure adherence to regulations and ultimately give firms a competitive edge.

Another factor why organizations are increasingly motivated to innovate their business models is due to the considerable influence of environmental and social sustainability issues (Carrasco-Ferré et al., 2022; Best et al., 2021; Evans et al., 2017; Velter et al., 2020; Schaltegger et al., 2016). The authors suggest that companies are motivated to innovate their business models through sustainability concerns due to several reasons, including increasing value for stakeholders, meeting consumer preferences, improving efficiency and resilience, enhancing employer branding, gaining competitive advantages, increasing value for investors and improving supply chain efficiency. Companies are motivated to reinvent their business models due to concerns over environmental and social sustainability (Carrasco-Ferré et al., 2022; Best et al., 2021; Evans et al., 2017; Velter et al., 2020; Schaltegger et al., 2016). According to these authors, companies can enhance their value for stakeholders, meet consumer preferences more effectively, boost efficiency and resilience, enhance employer branding, gain a competitive edge, increase value for investors and improve supply chain efficiency by innovating their business model for sustainability purposes.

Finally, there are the external drivers, as mentioned in the following studies: Gassmann et al. (2014), Chesbrough (2010), Zott et al. (2011), Foss and Saebi (2017), Teece (2010), Zhang et al. (2021), Schaltegger et al. (2016), Geissdoerfer et al. (2022) and Amit and Zott (2012). External causes such as regulation, evolving market circumstances, shifting customer tastes and economic developments are all listed as incentives for business model innovation.

In literature review we identified external factors as drivers. As extrinsic factors and not a "*a planned effort to achieve something*", as driver is defined (Miller and Brown, 2013), we opted to classify them as motivators, even not being an internal willingness, but extrinsic factor.

It fits on the category why corporations innovate their business model rather than how they do it.

Besides why corporations innovate their business models, we can find widely available research on how corporations innovate their business models by using strategic and/or organizational drives.

Strategic drivers include the expansion into untapped markets, offering innovative value propositions, enhancing operational efficiency, exploring fresh income streams, using emerging technologies, targeting new consumer groups and utilizing novel distribution channels (Chesbrough, 2010; Amit and Zott, 2021; Teece, 2010; Osterwalder et al., 2005; Ujwary-Gil and Potoczek, 2020; Bigelow and Barney, 2021; Foss and Saebi, 2017; Zhang et al., 2021).

According to academics (Kafetzopoulos, 2021; Oliveira-Dias et al., 2022; Zhao et al., 2019; Foss and Saebi, 2017), business model innovation may also take the shape of organizational drivers, such as leadership changes, cultural changes, new processes, new procedures, or systems.

5.1.2 A framework for further analysis

We intend to further develop and enhance from the literature research and expand upon it by identifying the domains that were research with cases in agribusiness. We propose a framework that identifies motivators why corporations innovate their business model as create economic value, risk management, sustainability and external motivators (Figure 5.1 - Why and How Business Model Innovation Framework).

On how corporations innovate their business models, we propose the widely proposed by literature drivers: strategic drivers and operational drivers.

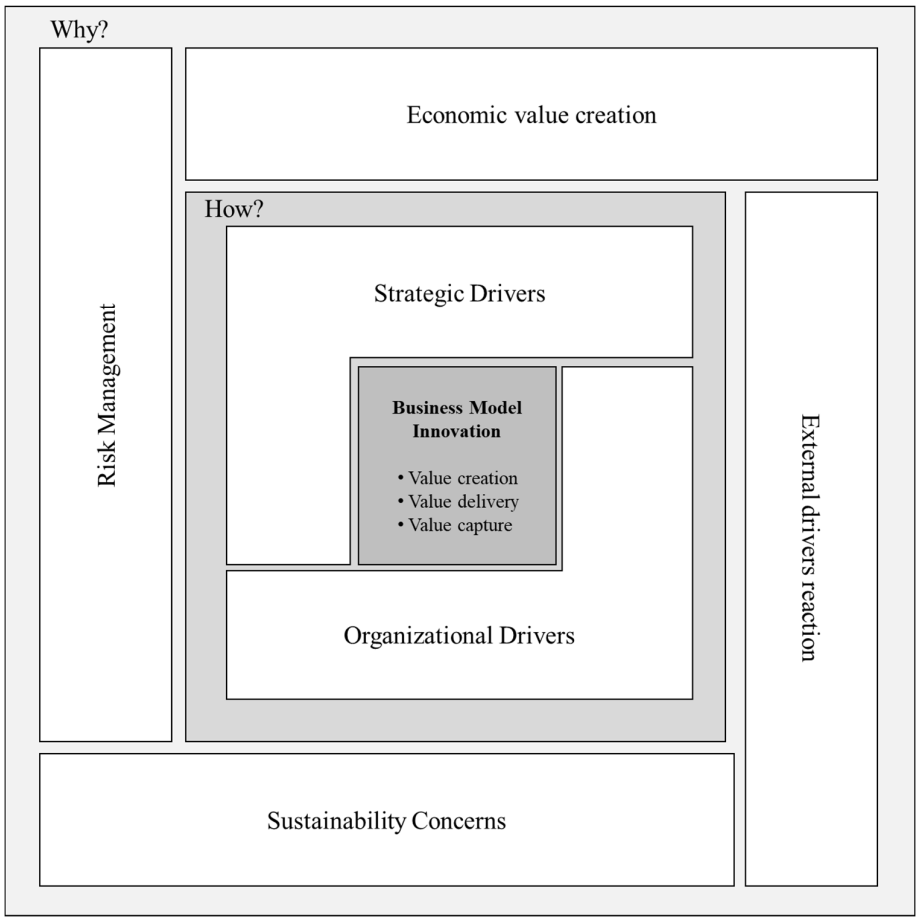

Figure 5.1 - Why and How Business Model Innovation Framework

Source: Own creation

The cases of Vitacress, Driscoll's, SP&F and Camposol illustrate various strategies employed in business model innovation. These include marketing differentiation from competitors (packaging, labeling), establishing partnerships in the production chain, adapting products to market opportunities and introducing new product categories through testing and experimentation.

We were able to discern shared elements. Strategic and operational as drivers, and motivators (as profitability, external motivators, risk management and sustainability) were identified in all situations.

The contribution of this research lies in its analysis of business model innovation and its exploration of the operations of individual organizations in both dynamic and less dynamic environments, while also considering their respective roles.

In this exploratory study, we could corroborate findings from literature and business model innovation which involves three main components architecture (value creation, value delivery and value capture). Corporations innovate their business models for several reasons and motives. Creation of economic value leads companies to innovate for higher profits and market expansion. Risk management and sustainability prompt companies to adopt practices ensuring long-term viability. External factors include adapting to market changes, new technologies, regulatory shifts, or evolving consumer preferences.

The way how agribusiness corporations implement their business model are through strategic and organizational drivers that align resources, capabilities and strategic goals to navigate and capitalize on new opportunities and challenges in the business environment.

Based on the preceding discussion we identified research gaps and we propose the following proposition for further exploration.

Our exploratory study not only corroborates previous literature but also provides new evidence suggesting that sustainability is an important motivator of business model innovation. While our findings are promising, they highlight the need for further research to fully understand the extent and mechanisms through which sustainability influences innovation. Companies are increasingly adopting sustainable practices not just for ethical reasons, but as strategic moves to enhance long-term viability and market competitiveness and we derive Proposition 1:

Proposition 1: *Firms that systematically have sustainability concerns tend to innovate their business models to solve them and to achieve long-term business success, characterized by creating economic value, deliver and capture it.*

This proposition suggests (yet insufficiently explored in literature) that by embedding environmental and social considerations into their business strategies, companies can create more robust value propositions that not only fosters a sustainable future but creates value and generates economic benefits. Testing this proposition in various industries and contexts will help validate the impact of business model innovation on long-term business outcomes and contribute to the growing body of knowledge in this field (not only sustainable business model, but sustainability of the business model innovation).

Although there are limited references in literature suggesting that risk management can motivate business model innovation, we suggest conducting a more thorough analysis. Building

upon the previous discussion on the importance of risk management as a motivator for business model innovation, we propose the following proposition for further investigation:

Proposition 2: *Organizations that prioritize comprehensive risk management strategies, encompassing market and operational risks, are more likely to drive effective business model innovation, leading to sustained competitiveness and resilience in more or less dynamic market environments.*

This proposition suggests that by embedding robust risk management practices into their innovation processes, corporations can better tackle uncertainties and explore on new opportunities. Testing this proposition across various industries and organizational contexts will help validate the critical role of risk management in fostering business model innovation and ensuring long-term business success.

The terms *drivers* and *motivators* are commonly used interchangeably, nevertheless, they possess different implications. As per the Cambridge Dictionary, *motivation* is defined as "*the willingness to do something, or something that causes willingness*". In contrast, *driver* is described as "*a planned effort to achieve something*", highlighting a methodical and coordinated push towards a certain objective. Motivation pertains to the internal elements that motivate action, whereas *drivers* refer to the organized and intentional efforts used to reach specified results. Comprehending this differentiation is vital in company settings, where innovation and strategy endeavors are impacted by both internal and external influences.

Corroborating literature in terms of drivers and reinforcing the scarce literature about motivators, we add on Risk Management and Sustainability as motivators of business model innovation.

Elaborating on the elements or principles followed by agribusiness corporations for conducting business model innovation we could find agility and leanness, depending on the dynamicity of the environment that they are playing and on the dynamic role they have, not completely corroborating the initial framework proposed by Ghezzi and Cavallo, 2020.

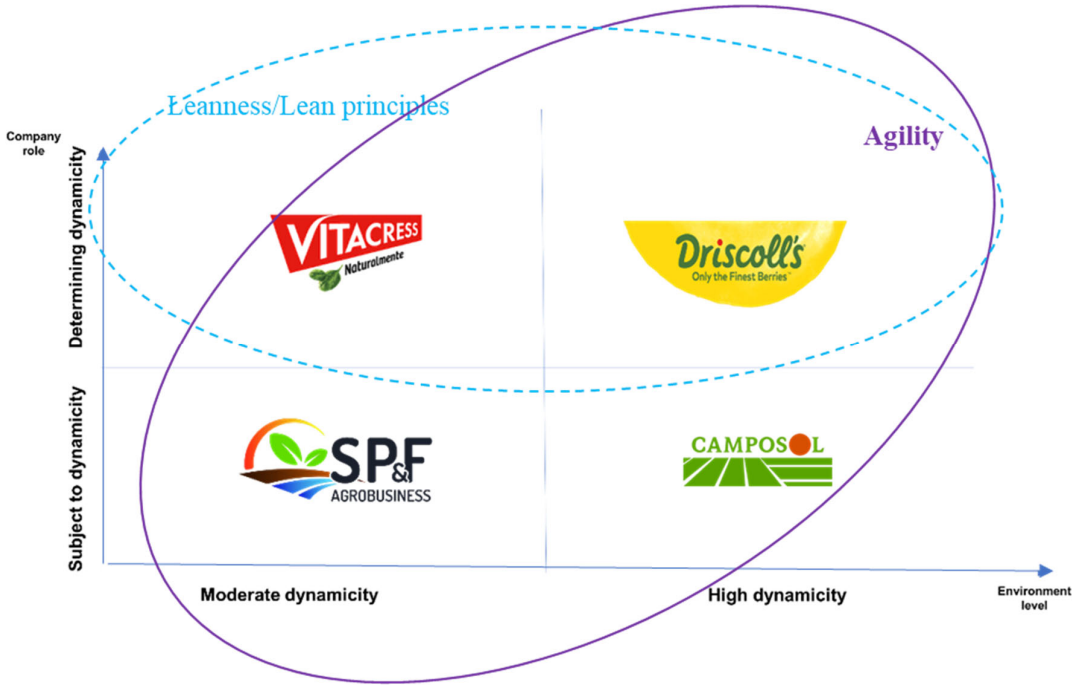

Figure 5.2 - Agility Principles and Lean Principles in Different Dynamic Environments and Roles

Source: Own creation

Agility plays a crucial role in business model innovation across all four cases studied - Vitacress, Driscoll's, SP&F and Camposol. All these firms exhibit agility in terms of their people, teams and organizational structures, enabling them to respond proactively to more dynamic or more moderate environments.

However, the extent of this leanness seems to vary depending on their dynamic role in the industry. The innovation cycle, proposed by Ries (2011) – "Build-Measure-Lean loop" - can easily, systematically and frequently be observed in these firms. Vitacress and Driscoll's are identified as having a more dynamic role. Vitacress, for example, has implemented an innovation funnel that operates once to twice a month, systematically stimulating, evaluating and foster implementation of innovation.

This structured process ensures continuous innovation and keeps the company ahead of industry trends.

Driscoll's demonstrates similar proactivity through substantial investment in research and development (R&D). Their efforts in finding and developing new plant varieties underscore

their commitment to leading industry advancements, local market needs and changing customer preferences.

This proactive and entrepreneurial culture is facilitated by an organizational culture that prioritizes innovation and agility, allowing them to swiftly adapt to and even anticipate market changes.

In contrast, SP&F and Camposol, which play a more moderate dynamic role, are primarily influenced by external market changes. These firms focus on promptly reacting to market demands and environmental changes. Despite this reactive orientation, they still display agility by quickly adapting their operations and strategies to maintain competitiveness. SP&F, operating in a moderately dynamic market, emphasizes adaptability and efficiency, making incremental improvements to align with market conditions. Similarly, Camposol adjusts its business model in response to increasing demand for lawn products, demonstrating a flexible approach to evolving market needs.

Both sets of companies, regardless of their dynamic role, act with agility. Firms with a more dynamic role, like Vitacress and Driscoll's, proactively implement frequent business model innovation through structured innovation processes and significant R&D investments.

Meanwhile, companies with a less dynamic role, such as SP&F and Camposol, maintain agility by reacting promptly to market changes and making necessary adjustments. This ability to act proactively and with agility, albeit through different approaches, highlights the critical role of agility in enabling firms to navigate and succeed in rapidly changing business environments.

Based on the findings from the comparative case analysis of Vitacress, Driscoll's, SP&F and Camposol, we propose the following two propositions for further testing in a broader sample and potentially in different industries:

Proposition 3: *Firms operating with highly dynamic role in their industry will use more frequent and systematic lean principles to innovate their business models.*

This proposition suggests that companies with dynamic stance, supported by substantial investments in R&D and internal mechanisms like innovation funnels and entrepreneurial culture tend to differentiate and drive significant changes in the industries. Testing this proposition in a broader and more diverse sample would help validate the relationship between

high environmental dynamism, proactive internal strategies and the frequency of business model innovation across different sectors.

Proposition 4: *Firms with more moderate dynamic roles tend to focus on market adaptability will still exhibit significant agility in business model innovation, but primarily through incremental innovation.*

This proposition posits that even companies with more moderate dynamic role, such as SP&F and Camposol, which tend to adapt rather than initiate industry changes, will demonstrate substantial agility in their business model innovation. Their focus on responding promptly to market shifts and environmental changes ensures they remain competitive, although their innovations are more reactive than proactive.

In order to enhance the comprehension of our research and provide a concise overview of our exploratory research, we suggest a framework that integrates fundamental concepts and constructs identified for further research and analysis.

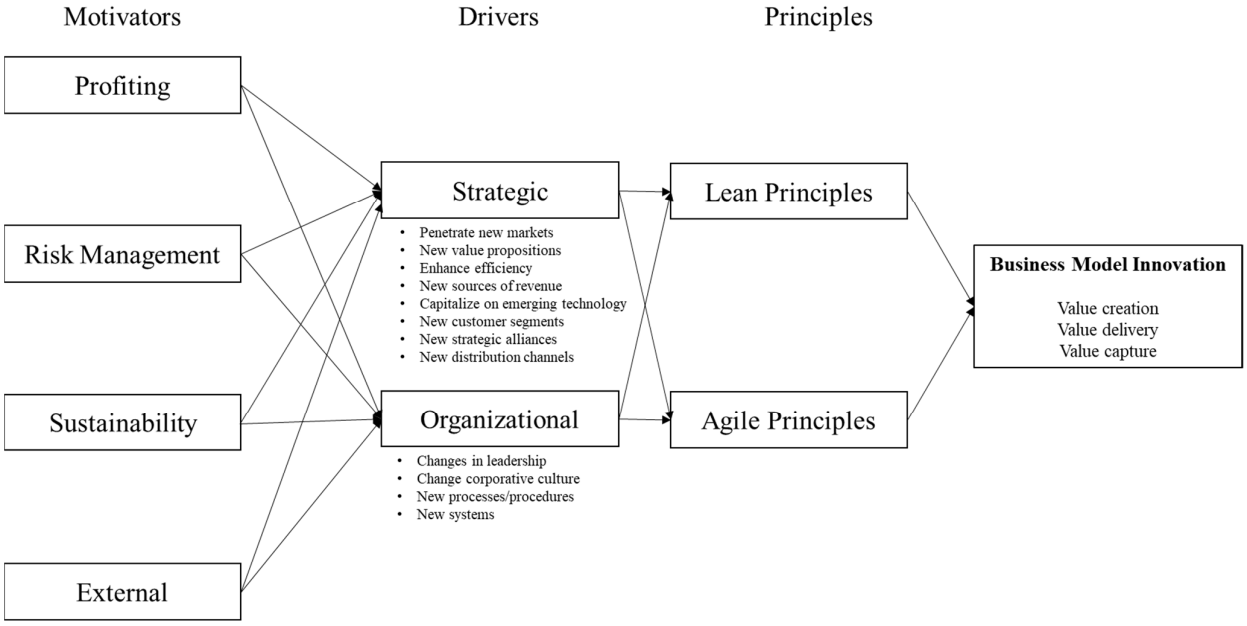

Figure 5.3 - Motivators, Drivers and Principles of Business Model Innovation

Source: Own creation

This paradigm seeks to combine the key elements of business model innovation, including value creation, delivery and capture, with the recognized motivators of business model innovation, such as economic value, risk management, sustainability and external influences.

The approach we present emphasizes how strategic and organizational factors drive the innovation process.

It views sustainability as both an ethical obligation and a business catalyst that may improve long-term success (value creation) and market competitiveness.

The framework functions as a guide for future study, providing a distinct structure to investigate the influence of various motivators and drivers on business model innovation. It promotes further empirical research to verify and build upon our discoveries, guaranteeing a thorough comprehension of the systems involved. Our objective in offering this framework is to provide a basis for further study and practical implementation in the realm of business model innovation.

[This page is deliberately left blank]

Chapter 6: Conclusion

In the ever-changing field of agribusiness, where dynamic markets, fast production-to-market fit (mainly due perishable characteristics of the products), technological advancements and customer increasing requirements have a significant impact, the aspiration and need of innovation seems crucial for long-term success. This result is derived from a systematic multi cases analysis, which was specifically meant to improve the knowledge about drivers, motivators and principles to business model innovation, supported on the framework proposed by Ghezzi and Cavalli (2020).

We conducted a study to analyze agribusinesses operation in markets with different levels of dynamism, ranging from moderate to high. Our objective was to understand the complexities involved in business model innovation within these organizations. We equated also the internal role played by the corporations fostering this innovation.

Our investigation of the motivators and drivers of business model innovation revealed a complex interaction of elements that impact corporation decision-making.

This research surpasses the conventional academic knowledge of innovation as solely a strategic requirement. The analysis results provide a holistic view, revealing the various motivators and drivers on why corporations innovate their business models, how they do it and which principles are mostly used to perform it.

A relevant finding from our research is the acknowledgment of risk management as a primary motivator for business model innovation. Agribusiness corporations, especially those operating in fast-changing markets, encounter a multitude of risks (operational, environmental, financial, market fluctuations, supply chain), both internal and external.

Our studies have suggested that business model innovation acts as a strategic instrument to actively tackle these challenges, allowing firms to develop resilience and deal with uncertainties efficiently.

Agribusinesses in moderately dynamic markets had a strong understanding of the necessity for strategic adjustments in their business models to maintain competitiveness. Swiftly adapting and incrementally aligning the business model with the changing market dynamics became a key factor for success in these circumstances.

Corporations playing in high dynamic markets observe rapid and unexpected changes, as in customer preferences, technological innovation and regulatory scenario. Our research shed light on how these firms perceive business model innovation as a strategy to ensure their

survival and build and maintain a competitive advantage and a way to consistently adapt to market conditions.

The association between sustainability and business model innovation in agribusiness is very relevant.

"The environment (soil, water, atmosphere) is our main productive factor. In addition to environmental concerns (which are at least as significant as for any other industry) and even if only for selfish reasons, we have the greatest concern and interest in preserving and improving environmental conditions. If the soil or water is degraded, next year or on the following, we will no longer have land to cultivate and we will close the activity. Our greatest interest is more than just preserving the environment."

Producer Association Director

Our analysis revealed that firms, regardless of their market dynamics, are increasingly recognizing sustainability as a crucial motivator of business model innovation. Environmental and social factors have moved beyond being just part of corporate social responsibility and have become essential elements of the value proposition and daily operations.

The incorporation of sustainable practices, ranging from environmentally conscious supply chains to socially accountable activities, was recognized as a significant motivator for business model innovation.

6.1 Key Findings

The study provides valuable suggestions into business model innovation in agribusiness, identifying risk management and sustainability as key motivators.

Effective risk management seems crucial in industries facing changing customer expectations, technological advancements and regulatory changes. The study suggests that firms strategically innovate their business models as a mean to address risks, uncertainties and hazards.

In volatile markets, the necessity for risk management through business model innovation is even more pronounced, with firms considering innovation as essential for survival and to have a competitive advantage. The findings highlight the complex relationship between risk management and business model innovation, illustrating how companies change their business models to manage risks (identify, avoid, transfer, mitigate and control).

Environmental and social sustainability also influence decision-making and business model innovation. Firms are increasingly integrating sustainable practices not just in reaction to external pressures (stakeholders and customers sustainable preferences), but as deliberate strategies aligned with evolving cultural norms and environmental needs to create value. This shift underscores sustainability as integral to long-term value creation and value propositions. Sustainable practices are employed not only for ethical reasons but also to reduce environmental, social risks as well as creating value to the corporation. These findings enhance the understanding of business dynamics in agribusiness and provide a foundation for future research and practical applications.

This research also could find that agility seems to be a crucial principle observed across all agribusiness corporations, regardless of their industry dynamicity level or dynamic roles. However, the application of lean principles was particularly evident in companies playing more dynamic roles, such as Driscoll's and Vitacress. These companies, operating in highly dynamic markets, demonstrated a pronounced need for agility and leanness to adapt to changing conditions, customer expectations, technological advancements and regulatory shifts.

Driscoll's and Vitacress illustrate how lean principles can be effectively employed to enhance and disrupt their industries. By streamlining processes, reducing waste and focusing on value creation, these corporations can respond more rapidly and efficiently to market changes. Lean principles support the flexibility and adaptability required in such volatile environments, allowing these firms to maintain competitiveness and manage operational risks more effectively.

The study's findings suggest that while agility is universally essential, the extent to which lean principles are integrated into business models varies according to the firm's dynamic role. In more dynamic settings, lean principles provide a strategic advantage, enabling companies to innovate continuously and manage uncertainties proactively.

6.2 Discussion of Results and Research Questions

The analysis and interpretation of the findings in this study including multiple cases is an essential step in understanding and combining the complex nature of agribusiness dynamics. The investigation, which examined four separate case studies, tried to understand the interaction of factors that influence business model innovation. Every case was carefully chosen to illustrate different levels of market dynamism and business functions within these dynamic environments.

We intend to bring the knowledge collected in each case study and in the cross analysis and build theory with it. Building ground theory after creating a data structure (Gioia, 2023)

"This implies that we should portray our informants' experience in their terms, not in the terms we researchers might want to use."

Magnani and Gioia, (2023, p.2)

Upon analyzing the outcomes of cases occurring in both moderately and highly dynamic markets, a consistent pattern became apparent - the deliberate actions taken by agribusiness corporations to address the difficulties presented by market changes. Corporations in moderately dynamic environment had a strong understanding of the necessity for strategic adaptation.

The study aimed to answer the research question "*1. How agribusiness organizations operating in dynamically evolving environments exhibit a higher (if so) propensity for business model innovation compared to those in more stable environments?*", meaning whether agribusiness organizations in dynamically evolving environments show a higher propensity for business model innovation compared to those in more stable environments.

Surprisingly, the findings do not indicate clear evidence that companies in highly dynamic environments are more propense to innovate their business models. Furthermore, even within dynamic markets, corporations did not uniformly adopt the same principles. Both Driscoll's and Camposol exhibited agility, but Driscoll's more systematically and regularly applied lean principles. This suggests that while agility is a common trait (also common on corporations playing a more moderately dynamic environments), the implementation of lean principles varies, highlighting diverse strategic approaches within dynamic markets.

In both cases, we could identify strategic and organizational drivers of business model innovation, nevertheless, we can highlight the culture and leadership which played a relevant role on fostering this innovation.

The research also explored the second research question on "*How does the internal dynamism of agribusiness organizations affect their capacity to develop, execute and maintain business model innovations in the long run?"*, meaning how internal dynamism in agribusiness organizations affects their long-term capacity to, execute and maintain business model innovations.

Findings indicate that corporations with higher internal dynamism employ more frequent and systematically lean principles (also frequently with agility). This strategic use of lean principles enables these organizations to effectively create, deliver, and capture value, fostering continuous innovation and resilience. The consistent application of lean principles helps these dynamic firms maintain their competitive edge and adaptability, ensuring sustained success in rapidly changing environments and even disrupt their industries with radical or disruptive innovations.

As the third research question "*What are the drivers and motivators for business model innovation in the agribusiness sector and how do these aspects vary depending on the degrees of external and internal changes in organizations?*", meaning we investigated the drivers and motivators for business model innovation in agribusiness and how principles vary with external and internal changes.

Consistent with existing literature, strategic and organizational drivers were identified, along with external motivators such as market fluctuations, customer preferences and technological advancements. Notably, the study highlighted risk management and sustainability as relevant motivators, areas less explored in previous research.

Contrary to Ghezzi and Cavallo (2020), the findings revealed that agility was a common principle across all environments and roles. However, lean principles were more systematically and prominently applied in corporations operating with more dynamic roles, showcasing varied strategic adaptations to innovation.

6.3 Theoretical Implications

The theoretical implications of this multi-case research in agribusiness have a wider scope than only the specific findings. They provide useful insights into the field of business model innovation and enhance the existing theoretical knowledge in this area.

This study not only propose drivers and motivators influencing business model innovation, but also helps to the enhancement and broadening of theoretical frameworks, specifically the Ghezzi and Cavalli (2020) model.

The concept of business model innovation is complex, frequently marked by ambiguity and scarce of specific definition. The study has theoretical ramifications as it helps to explain and enhance the existing but unclear theory on business model innovation. The study helps to clarify the complexity of business model innovation by offering empirical evidence and detailed insights into the various factors that lead agribusiness firms to innovate in their business models.

Recognizing risk management and environmental and social sustainability as crucial motivators provides more specific suggestion into the reasons why firms choose to innovate their business models. This clarification is crucial for enhancing the theoretical discourse regarding business model innovation, providing a more detailed viewpoint that recognizes the various motivators and drivers that lead this corporative phenomenon.

The framework developed by Ghezzi and Cavalli (2020) offers a systematic approach to analyze business model innovation, considering key factors such as strategic, organizational and external causes. The study has theoretical ramifications as it contributes to enhancing and broadening the existing framework. The incorporation of risk management as a catalyst underscores the crucial need to reduce uncertainties, in line with the strategic catalyst highlighted in Ghezzi and Cavalli's approach.

Moreover, the explicit acknowledgment of environmental and social sustainability as motivator broadens the scope of the framework in terms of both internal and external aspects. This enrichment corresponds to the increasing acknowledgment of sustainability as a strategic factor in modern corporate processes. This study enhances the Ghezzi and Cavalli (2020) framework by recognizing and incorporating new factors that significantly influence the development of business model innovation strategies in the agribusiness.

In addition to the contributions made to current frameworks, the study's theoretical implications also intend to suggest factors that motive and drive business model innovation in the agribusiness sector. The recognition of risk management as a key factor emphasizes the idea that businesses adopt business model innovation not only to gain strategic benefits, but also as a proactive measure to address operational and external uncertainties. Providing this explanation seems crucial for furthering theoretical discussions on the motives driving business model innovation.

The study's theoretical ramifications also provide potential directions for further research and theoretical investigation. The identified factors serve as a basis for conducting more research on the complex interconnections among risk management, sustainability and business model innovation. Further research might explore the complex ways in which these factors interact and impact the decision-making process within organizations, providing a more thorough comprehension of the theoretical foundations of business model innovation in the agribusiness sector. Also, other industries and more broad studies (more industries, more corporations) could enrich and allow the generalization of the knowledge.

To summarize, this study's theoretical implications go beyond the specific agribusiness environment and make a contribution to the wider discussion on business model innovation. The study enhances the current theory, expands existing frameworks, clarifies the factors that motive and drive business model innovation and proposes directions for future research. It establishes a theoretical basis that not only improves our comprehension of business model innovation but also encourages further academic research.

6.4 Practical and Social Implications

The practical consequences of this multi-case study in agribusiness pertain to providing practical and applicable insights for firms that operate in different market dynamics and assume different roles within these marketplaces. The motivators and drivers of business model innovation have been identified. These motivators and drivers serve as suggestion of strategic roadmap for both established and new firms, regardless of their market dynamics or roles.

The study suggests that firms operating in moderately dynamic markets also can create value, innovating their business model, eventually, adopting a strategic approach to business model innovation in order to proactively respond to market changes and maintain a competitive edge and, eventually, with organizational drivers though culture and leaderships changes that foster their lean principles and entrepreneurial attitude.

The results suggest that firms can strategically align their business models by proactively anticipating changes in consumer preferences, technological improvements and regulatory landscapes. Corporations can maintain their competitive edge and long-term relevance in modestly changing settings by promoting a culture of strategic flexibility and agility.

In more dynamic environments, we could observe that firms do not only adjust but also consider business model innovation as an essential strategy for survival and growth. This research suggests prioritizing organizational agility and adopting a proactive approach towards embracing changes.

Corporations may efficiently manage risks and thrive in highly dynamic landscapes by utilizing business model innovation as a dynamic response mechanism.

This study highlights the capacity of organizations to improve their results by using business model innovation.

Organizations can get a competitive advantage by actively participating in strategic changes and adopting innovative business models. This may include the identification of new markets

or new sources of income, the enhancement of operational effectiveness and the establishment of a unique position in the market.

Corporations, especially those that are new to the market (as illustrated by internationalization of Driscoll's or SP&F; new product of Camposol), might utilize business model innovation to enter the market (eventually) in a disruptive manner. The findings indicate that in industries with moderate or high levels of dynamism, new competitors can create specialized market segments and disrupt established companies by strategically reinventing their business models.

Corporations, regardless of their market dynamics, are advised to consider business model innovation as both a reaction to uncertainty and a proactive strategy for reducing risks. The study proposes that firms can reinforce their ability to manage operational and external risks by including adaptability into their business strategies.

This study illustrates how corporations have the ability to create adaptable supply chains and operational procedures that can be quickly modified in reaction to unexpected changes. Strategic pivoting in reaction to risks is a vital aspect of risk management, guaranteeing that organizations can navigate changes, challenges and uncertainty and consistently provide value to stakeholders.

The study also emphasizes the increasing significance of environmental and social sustainability as motivator for the development of innovative business models. Corporations are teased to include sustainability factors into their business models, not just as a reaction to external influences (regulatory and customer preferences), but as a crucial strategic necessity to create value. This includes implementing environmentally conscious supply chains, participating in socially accountable efforts and harmonizing corporate models with overarching sustainability objectives.

Corporations can effectively improve their reputation, establish trust with stakeholders and gain entry into new markets by integrating sustainability into their business processes. The study indicates that firms can obtain actual economic advantages from sustainability practices, extending beyond ethical considerations, thereby making it a crucial component in strategic decision-making.

This research also implies the social importance of developing new business models to effectively manage risks, achieve sustainability, protect the environment, integrate migrants and other cultures and promote economic stability, ultimately benefitting society as a whole.

To summarize, this study provides practical insights for agribusiness firms, offering clear direction and suggesting how corporations can strategically implement business model innovation by considering market dynamics and company roles. Corporations can achieve sustainable success and significant societal impact by including risk management and sustainability into their business model innovation.

6.5 Limitations of the Study

Although a multi-case study, is a robust approach for thorough investigation and comprehension within a certain field, it is crucial to identify and accept its inherent limits, especially in terms of generalizability. When examining this study, which is centered around a one specific industry like agribusiness, it is important to acknowledge some constraints.

The main constraint of doing a multi-case study within a particular sector is the fact that the conclusions are very dependent on the unique context in which the study is conducted. The knowledge obtained from the theoretically selected cases in agribusiness may heavily rely on the distinct attributes, dynamics and difficulties inside this industry. Hence, the generalizability of the results to other sectors or businesses might be restricted.

The difficulty of generalizability is a fundamental restriction of qualitative research, particularly multi-case studies. The findings are constrained to the specific environment in which they were obtained and may not be readily applicable to other sectors or even within the wider agribusiness field, to other corporations. The study's outcomes may have limited generalizability due to the distinctiveness of the cases and the unique nature of the industry.

The case selection procedure may add bias, so restricting the representation of the wider sector. The selection of cases, being theoretical to study the specific attributes (like the environmental dynamism of the market and the role played by the agribusiness) may be biased by certain variables, which may not accurately represent the diversity of the whole agriculture sector.

Qualitative research, such as multi-case studies, are typically better at identifying connections and patterns rather than determining causation. Although the study can establish associations between variables, it may not conclusively establish causal linkages. This constraint impedes the capacity to draw definitive conclusions regarding the influence of certain variables on the advancement of business models in the wider agriculture industry.

This constraint avoids the capacity to measure the importance of motivators and drivers of business model innovation.

The agribusiness industry, like to other industries, is influenced by changing trends, regulatory modifications and technological progress. A multi-case study provides a focused and specialized examination of a certain moment in time and its conclusions may not accurately represent any following changes or advancements. The timing limits restrict the study's capacity to offer immediate insights or consider ongoing developments within the agribusiness industry. To handle this limitation, we conducted the business model innovation analysis already implemented and tested.

Qualitative research is vulnerable to the impact of researcher subjectivity. The researcher's perspective inevitably influences the interpretation of findings, coding of data and selection of themes. Although attempts are taken to reduce bias, the researcher's subjectivity can impose constraints on the study's objectivity and generalizability. One conducted reflexibility to manage the researcher subjectivity limitation.

Agribusiness is distinguished by its dynamic nature, which is shaped by elements such as climate, market trends and geopolitical events. A multi-case study offers valuable insights within a defined period, but the ever-changing nature of the industry may lead to changes that the study cannot fully encompass.

To summarize, doing a multi-case study in a particular industry such as agribusiness offers richness and valuable insights into the complexities of business model innovation. However, it is important to recognize the study's limits. The findings of the study are specific to the setting in which they were obtained. There are issues in applying these findings to other situations due to limitations in generalizability and methodological constraints. Therefore, it is important to assess and consider the study's applicability carefully and with caution, especially when applying it beyond its specific scope.

6.6 Conclusion and Final Thoughts

The conclusion of this analysis in the field of agribusiness offers a thorough comprehension of business model innovation in the industry. It reveals the complex relationship when studying business model innovation as the architecture of value creation, delivery and capture (Teece, 2010) and highlights the risk management and environmental and social sustainability as motivators of business model innovation. While examining the results, theoretical

consequences and practical factors (for corporations and society), the conclusion acts as a consolidation of the study's contributions.

The exploration of multi-cases in agribusiness, encompassing markets of different levels of dynamism and firms more dynamic or more moderate role, has revealed significant findings regarding the motivators and drivers behind business model innovation. The study highlights the importance of risk management, emphasizing how firms actively change their business models to tackle uncertainties in their operations and external environment. Also, sustainability emerged as a relevant motivator, indicating a change in which companies perceive sustainability as both a duty and a strategic element (to create economic value) of their business models.

Theoretical implications enhance the existing, although unclear, theory on business model innovation by providing detailed insights into the complex motivators and drivers of business model innovation. The Ghezzi and Cavalli (2020) framework supports and improves the comprehension by structuring the analysis in different environments and roles and allows us to study the agile and lean principles adopted by the corporation.

Practical implications serve as a guide for firms in the agribusiness, offering concrete examples for both established companies and emerging players (in new markets). Also suggests the societal relevance of innovating business models on managing risks, attain sustainability, enhance food security, environmental conservation, migrant integration and economic residence, benefiting the society as a whole.

The study promotes the use of a strategic approach to innovate business models, ensuring that organizational strategies are in line with the ever-changing nature of the agribusiness sector.

Using as a business model to improve performance, manage risk and achieve sustainability becomes a strategy for organizations to not only survive but also prosper in the constantly changing business environment.

Within the wider scope of agribusiness, this study can be seen as a guide/example for firms as they navigate the complex landscape of innovation. This highlights the importance of being agile, adaptable and having strategic foresight, underlining that innovating business models is not only a response to change, but a proactive approach to influencing change.

The cases, although distinct to their respective contexts, provide useful lessons and insights that have relevance across other industries, serving as a benchmark of the universal significance of strategic adaptability.

The study acknowledges its limitations, including the absence of generalizability and the potential biases that may have been introduced during case selection. Although the findings offer detailed and comprehensive insights into the agribusiness sector, it is important to be cautious when applying these conclusions indiscriminately.

Potential future research might investigate the interactions between these motivators and drivers in various industries or examine the changing dynamics of agribusiness to capture changes that were not addressed in this study. Replicate the study and validate it with a broader number of corporations would improve the knowledge and shed light on the results and theory.

As we wrap off this investigation into the motivators and drivers of business model innovation in agribusiness, the industry seems to be influenced by dynamic market dynamics, the need for risk management and the increasing need for sustainability. The study advocates for firms to embrace change as an opportunity, perceiving innovation not as a disruption but as a strategic reaction to the changing demands of the market and society.

This study emphasizes the need for strategic innovation that goes beyond traditional limits in the agroindustry, where more than the economic value, but also the purpose of environmental sustainability, economic resilience and social responsibility are interconnected. Business models, similar to crops in a field, require careful care to adapt to changing circumstances and succeed despite uncertainty.

References

Achtenhagen, L., Melin, L., & Naldi, L. (2013). Dynamics of business models—strategizing, critical capabilities and activities for sustained value creation. *Long Range Planning*, 46: 427-442. https://doi.org/10.1016/j.lrp.2013.04.002

Adams, R., Bessant, J., & Phelps, R. (2006). Innovation management measurement: A review. *International Journal of Management Reviews*, *8*(1), 21–47. https://doi.org/10.1111/j.1468-2370.2006.00119.x

Afuah, A., & Tucci, C. L. (2001). *Internet business models and strategies: Text and cases* (pp. 29-35). New York: McGraw-Hill.

Agarwal, A., Shankar, R., & Tiwari, M. K. (2006). Modeling the metrics of lean, agile and leagile supply chain: An ANP-based approach. *European journal of operational research*, *173*(1), 211-225. https://doi.org/10.1016/j.ejor.2004.12.005

AgileManifesto. 2001, *Manifesto for Agile Software Development.*

Ahmad, S., & Schroeder, R. G. (2003). The impact of human resource management practices on operational performance: recognizing country and industry differences. *Journal of operations Management*, *21*(1), 19-43. https://doi.org/10.1016/s0272-6963(02)00056-6

Almeida Costa, A., & Zemsky, P. (2021). The choice of value-based strategies under rivalry: Whether to enhance value creation or bargaining capabilities. *Strategic Management Journal*, *42*(11), 2020-2046. https://doi.org/10.1002/smj.3282

Alvarez, S., Afuah, A., & Gibson, C. (2018). Editors' comments: Should management theories take uncertainty seriously?. *Academy of Management Review*, *43*(2), 169-172. https://doi.org/10.5465/amr.2018.0050

Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic management journal*, *22*(6-7), 493-520. https://doi.org/10.1002/smj.187

Amit, R., & Zott, C. (2010). Business model innovation: Creating value in times of change. http://dx.doi.org/10.2139/ssrn.1701660

Amit, R., & Zott, C. (2012). Creating value through business model innovation. *2012*, *53*.

Amit, R., & Zott, C. (2020). *Business model innovation strategy: Transformational concepts and tools for entrepreneurial leaders*. John Wiley & Sons.

Angeli, F., & Jaiswal, A. K. (2016). Business model innovation for inclusive health care delivery at the bottom of the pyramid. *Organization & Environment*, *29*(4), 486-507. https://doi.org/10.1177/1086026616647174

Aspara, J., Lamberg, J.-A., Laukia, A., & Tikkanen, H. (2013). Corporate business model transformation and interorganisational cognition: The case of Nokia. *Long Range Planning*, 46: 459-474. https://doi.org/10.1016/j.lrp.2011.06.001

Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research policy*, *43*(7), 1097-1108. https://doi.org/10.1016/j.respol.2014.01.015

Ayala, N. F., Gerstlberger, W., & Frank, A. G. (2018). Managing servitization in product companies: the moderating role of service suppliers. *International Journal of Operations & Production Management*. https://doi.org/10.1108/IJOPM-08-2017-0484

Balboni, B., Bortoluzzi, G., Pugliese, R., & Tracogna, A. (2019). Business model evolution, contextual ambidexterity and the growth performance of high-tech start-ups. *Journal of Business Research*, *99*, 115-124. https://doi.org/10.1016/j.jbusres.2019.02.029

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120. https://doi.org/10.1177%2F014920639101700108

Barney, J. B., & Clark, D. N. (2007). *Resource-based theory: Creating and sustaining competitive advantage*. OUP Oxford.

Belenzon, S., & Schankerman, M. (2015). Motivation and sorting of human capital in open innovation. *Strategic Management Journal*, *36*(6), 795-820. https://doi.org/10.1002/smj.2284

Bellman, R., Clark, C. E., Malcolm, D. G., Craft, C. J., & Ricciardi, F. M. (1957). On the construction of a multi-stage, multi-person business game. *Operations Research*, *5*(4), 469-503. https://doi.org/10.1287/opre.5.4.469

Bennett, N., & Lemoine, J. (2014). What VUCA really means for you. *Harvard business review*, *92*(1/2).

Berry, D. J. (2021). Historiography of Plant Breeding and Agriculture. *Handbook of the Historiography of Biology*, 499-525.

Bessant, J., & Tidd, J. (2007). *Innovation and entrepreneurship*. John Wiley & Sons.

Best, B., Miller, K., McAdam, R., & Moffett, S. (2021). Mission or margin? Using dynamic capabilities to manage tensions in social purpose organisations' business model innovation. *Journal of Business Research*, *125*, 643-657. https://doi.org/10.1016/j.jbusres.2020.01.068

Bhatti, S. H., Santoro, G., Khan, J., & Rizzato, F. (2021). Antecedents and consequences of business model innovation in the IT industry. *Journal of Business Research*, *123*, 389-400. https://doi.org/10.1016/j.jbusres.2020.10.003

Bigelow, L. S., & Barney, J. B. (2021). What can strategy learn from the business model approach?. *Journal of Management Studies*. https://doi.org/10.1111/joms.12579

Blank, S. (2013). Why the lean start-up changes everything. *Harvard business review*, *91*(5), 63-72.

Blank, S., & Dorf, B., 2012. *The Startup Owners Manual: The Step-by-Step Guide for Building a Great Company*. K&S Ranch.

Bock, A. J., Opsahl, T., George, G., & Gann, D. M. (2012). The effects of culture and structure on strategic flexibility during business model innovation. *Journal of Management Studies*, 49: 279-305. https://doi.org/10.1111/j.1467-6486.2011.01030.x

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

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

Bocken, N. M., & Geradts, T. H. (2020). Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities. *Long range planning*, *53*(4), 101950. https://doi.org/10.1016/j.lrp.2019.101950

Bocken, & N., Snihur, Y. (2020). Lean Startup and the business model: Experimenting for novelty and impact. *Long Range Planning*, *53*(4), 101953. https://doi.org/10.1016/j.lrp.2019.101953

Bohnsack, R., Kurtz, H., & Hanelt, A. (2021). Re-examining path dependence in the digital age: The evolution of connected car business models. *Research Policy*, *50*(9), 104328. https://doi.org/10.1016/j.respol.2021.104328

Bohnsack, R., Pinkse, J., & Kolk, A. (2014). Business models for sustainable technologies: Exploring business model evolution in the case of electric vehicles. *Research Policy*, 43: 284-300. https://doi.org/10.1016/j.respol.2013.10.014

Bolton, R., & Hannon, M. (2016). Governing sustainability transitions through business model innovation: Towards a systems understanding. *Research Policy*, *45*(9), 1731-1742. https://doi.org/10.1016/j.respol.2016.05.003

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Brax, S. A., Calabrese, A., Ghiron, N. L., Tiburzi, L., & Grönroos, C. (2021). Explaining the servitization paradox: a configurational theory and a performance measurement framework. *International Journal of Operations & Production Management*. https://doi.org/10.1108/IJOPM-08-2020-0535

Brea-Solís, H., Casadesus-Masanell, R., & Grifell-Tatjé, E. (2015). Business Model Evaluation: Quantifying W almart's Sources of Advantage. *Strategic Entrepreneurship Journal*, *9*(1), 12-33. https://doi.org/10.1002/sej.1190

Bustinza, O. F., Gomes, E., Vendrell-Herrero, F., & Baines, T. (2019). Product–service innovation and performance: the role of collaborative partnerships and R&D intensity. *R&D Management*, *49*(1), 33-45. https://doi.org/10.1111/radm.12269

Cao, L. (2014). Business model transformation in moving to a cross-channel retail strategy: A case study. *International Journal of Electronic Commerce*, *18*(4), 69-96. https://doi.org/10.2753/JEC1086-4415180403

Campanelli, A. S., & Parreiras, F. S. (2015). Agile methods tailoring–A systematic literature review. *Journal of Systems and Software*, *110*, 85-100. https://doi.org/10.1016/j.jss.2015.08.035

Camposol website, 2024a, https://www.camposol.pt/, retrieved in 2024, March, 17th.

Camposol website, 2024b, https://www.camposol.pt/pt/relva/ retrieved in 2024, April 14th.

Conboy, K., & Fitzgerald, B. (2010). Method and developer characteristics for effective agile method tailoring: A study of XP expert opinion. *ACM Transactions on Software Engineering and Methodology (TOSEM)*, *20*(1), 1-30. https://doi.org/10.1145/1767751.1767753

Carayannis, E. G., Sindakis, S., & Walter, C. (2015). Business model innovation as lever of organizational sustainability. *The Journal of Technology Transfer*, *40*(1), 85-104. http://doi.org/10.1007/s10961-013-9330-y

Carlson, N. A. (2023). Differentiation in microenterprises. *Strategic Management Journal*, *44*(5), 1141-1167. https://doi.org/10.1002/smj.3463

Carrasco-Farré, C., Snihur, Y., Berrone, P., & Ricart, J. E. (2022). The stakeholder value proposition of digital platforms in an urban ecosystem. *Research Policy*, *51*(4), 104488. https://doi.org/10.1016/j.respol.2022.104488

Casadesus-Masanell, R., & Zhu, F. (2013). Business model innovation and competitive imitation: The case of sponsor-based business models. *Strategic Management Journal*, 34: 464-482. https://doi.org/10.1002/smj.2022

Chammassian, R. G., & Sabatier, V. (2020). The role of costs in business model design for early-stage technology startups. *Technological Forecasting and Social Change*, *157*, 120090. https://doi.org/10.1016/j.techfore.2020.120090

Chang, S. J., & Matsumoto, Y. (2022). Dynamic resource redeployment in global semiconductor firms. *Strategic Management Journal*. https://doi.org/10.1002/smj.3332

Chesbrough, H. (2002). Graceful exits and missed opportunities: Xerox's management of its technology spin-off organizations. Business History Review, 76(4), 803-837. https://doi.org/10.2307/4127710

Chesbrough, H. (2010). Business model innovation: opportunities and barriers. *Long range planning*, *43*(2-3), 354-363. https://doi.org/10.1016/j.lrp.2009.07.010

Clark, S. M., Gioia, D. A., Ketchen, D. J., Jr., & Thomas, J. B. (2010). Transitional identity as a facilitator of organizational identity change during a merger. *Administrative Science Quarterly*, 55(3), 397–43 https://doi.org/10.2189/asqu.2010.55.3.397

Clauss, T. (2017). Measuring business model innovation: conceptualization, scale development, and proof of performance. *R&d Management*, *47*(3), 385-403. https://doi.org/10.1111/radm.12186

Clauss, T., Abebe, M., Tangpong, C., & Hock, M. (2019a). Strategic agility, business model innovation, and firm performance: an empirical investigation. *IEEE Transactions on Engineering Management*, *68*(3), 767-784. https://doi.org/10.1109/TEM.2019.2910381

Clauss, T., Kesting, T., & Naskrent, J. (2019b). A rolling stone gathers no moss: the effect of customers' perceived business model innovativeness on customer value co-creation behavior and customer satisfaction in the service sector. *R&D Management*, *49*(2), 180-203. https://doi.org/10.1111/radm.12318

Climent, R. C., & Haftor, D. M. (2021). Value creation through the evolution of business model themes. *Journal of Business Research*, *122*, 353-361. https://doi.org/10.1016/j.jbusres.2020.09.007

Coase, R. H. (1937). The nature of the firm. *economica*, *4*(16), 386-405. https://doi.org/10.2307/2626876

Collis, D. J. (1994). Research note: how valuable are organizational capabilities?. *Strategic management journal*, *15*(S1), 143-152. https://doi.org/10.1002/smj.4250150910

Conboy, K., & Fitzgerald, B. (2004, November). Toward a conceptual framework of agile methods: a study of agility in different disciplines. In *Proceedings of the 2004 ACM workshop on Interdisciplinary software engineering research* (pp. 37-44). https://doi.org/10.1145/1029997.1030005

Cooper, R. G., & Sommer, A. F. (2016). The agile–stage-gate hybrid model: a promising new approach and a new research opportunity. *Journal of Product Innovation Management*, *33*(5), 513-526. https://doi.org/10.1111/jpim.12314

Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, *13*(1), 3-21.

Corley, K. G., & Gioia, D. A. (2004). Identity ambiguity and change in the wake of a corporate spin-off. *Administrative science quarterly*, *49*(2), 173-208. https://doi.org/10.2307/41314

Cornelissen, J. P. (2017). Preserving theoretical divergence in management research: Why the explanatory potential of qualitative research should be harnessed rather than suppressed. *Journal of Management Studies*, *54*(3), 368-383. https://doi.org/10.1111/joms.12210

Cozzolino, A., Corbo, L., & Aversa, P. (2021). Digital platform-based ecosystems: The evolution of collaboration and competition between incumbent producers and entrant platforms. *Journal of Business Research*, *126*, 385-400. https://doi.org/10.1016/j.jbusres.2020.12.058

Cozzolino, A., & Verona, G. (2022). Responding to Complementary-Asset Discontinuities: A Multilevel Adaptation Framework of Resources, Demand, and Ecosystems. *Organization Science*, *33*(5), 1990-2017. https://doi.org/10.1287/orsc.2021.1522

Cucculelli, M., & Bettinelli, C. (2015). Business models, intangibles and firm performance: Evidence on corporate entrepreneurship from Italian manufacturing SMEs. *Small Business Economics*, 45: 329-350. https://doi.org/10.1007/s11187-015-9631-7

DaSilva, C. M., & Trkman, P. (2014). Business model: What it is and what it is not. *Long range planning*, *47*(6), 379-389. https://doi.org/10.1016/j.lrp.2013.08.004

De Silva, M., Al-Tabbaa, O., Khan, Z. (2021). Business model innovation by international social purpose organizations: The role of dynamic capabilities. *Journal of Business Research*, *125*, 733-749. https://doi.org/10.1016/j.jbusres.2019.12.030

Demil, B., & Lecocq, X. (2010). Business model evolution: In search of dynamic consistency. *Long Range Planning*, 43: 227-246. https://doi.org/10.1016/j.lrp.2010.02.004

Denicolai, S., Ramirez, M., & Tidd, J. (2014). Creating and capturing value from external knowledge: the moderating role of knowledge intensity. *R&D Management*, *44*(3), 248-26 https://doi.org/10.1111/radm.12065

Dentoni, D., Pinkse, J., & Lubberink, R. (2021). Linking sustainable business models to socio-ecological resilience through cross-sector partnerships: A complex adaptive systems view. *Business & Society*, *60*(5), 1216-1252. https://doi.org/10.1177/0007650320935015

Denzin, N. K. (1978). The research act: A theoretical introduction to sociological methods (2nd ed.). New York, NY: McGraw Hill.

Desyllas, P., & Sako, M. (2013). Profiting from business model innovation: Evidence from Pay-As-You-Drive auto insurance. *Research Policy*, *42*(1), 101-116. https://doi.org/10.1016/j.respol.2012.05.008

Dmitriev, V., Simmons, G., Truong, Y., Palmer, & M., Schneckenberg, D. (2014). An exploration of business model development in the commercialization of technology innovations. *R&D Management*, 44: 306-321. https://doi.org/10.1111/radm.12066

Doz, Y. L., Hamel, G. (1998). *Alliance advantage: The art of creating value through partnering*. Harvard Business Press.

Doz, Y. L., & Kosonen, M. (2010). Embedding strategic agility: A leadership agenda for accelerating business model renewal. *Long range planning*, *43*(2-3), 370-382. https://doi.org/10.1016/j.lrp.2009.07.006

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review*, *23*(4), 660-679. https://doi.org/10.5465/amr.1998.1255632

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550. https://doi.org/10.5465/amr.1989.4308385

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32. https://doi.org/10.5465/amj.2007.24160888

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they?. Strategic management journal, 21(10-11), 1105-1121. https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E

Eisenmann, T.R., Ries, E., & Dillard, S., 2012. Hypothesis-driven Entrepreneurship: the Lean Startup. *Harvard Business School Case* 9-812-095.

Ernkvist, M. (2015). The double knot of technology and business-model innovation in the era of ferment of digital exchanges: The case of OM, a pioneer in electronic options exchanges. *Technological Forecasting and Social Change*, *99*, 285-299. https://doi.org/10.1016/j.techfore.2015.02.001

Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E. A., & Barlow, C. Y. (2017). Business model innovation for sustainability: Towards a unified perspective for creation of sustainable business models. *Business strategy and the environment*, *26*(5), 597-608. https://doi.org/10.1002/bse.1939

Evenson, R. E., & Gollin, D. (2003). Assessing the impact of the Green Revolution, 1960 to 2000. *science*, *300*(5620), 758-762. 10.1126/science.1078710

Ferreras-Méndez, J. L., Olmos-Peñuela, J., Salas-Vallina, A., & Alegre, J. (2021). Entrepreneurial orientation and new product development performance in SMEs: The mediating role of business model innovation. *Technovation*, *108*, 102325. https://doi.org/10.1016/j.technovation.2021.102325

Fichman, R. G., Dos Santos, B. L., & Zheng, Z. (2014). Digital innovation as a fundamental and powerful concept in the information systems curriculum. *MIS quarterly*, *38*(2), 329-A15. https://www.jstor.org/stable/26634929

Foss, N. J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go?. *Journal of Management*, *43*(1), 200-227. https://doi.org/10.1177%2F0149206316675927

Foss, N. J., & Saebi, T. (2018). Business models and business model innovation: Between wicked and paradigmatic problems. *Long range planning*, *51*(1), 9-21. https://doi.org/10.1016/j.lrp.2017.07.006

Franke, N., & Hader, C. (2014). Mass or only "niche customization"? Why we should interpret configuration toolkits as learning instruments. *Journal of Product Innovation Management*, *31*(6), 1214-1234. https://doi.org/10.1111/jpim.12137

Frankenberger, K., & Stam, W. (2020). Entrepreneurial copycats: A resource orchestration perspective on the link between extra-industry business model imitation and new venture growth. *Long Range Planning*, *53*(4), 101872. https://doi.org/10.1016/j.lrp.2019.02.005

Fry, L. W., & Smith, D. A. (1987). Congruence, contingency, and theory building. *Academy of Management Review*, 12: 117-132. https://doi.org/10.5465/amr.1987.4306496

Futterer, F., Schmidt, J., & Heidenreich, S. (2018). Effectuation or causation as the key to corporate venture success? Investigating effects of entrepreneurial behaviors on business model innovation and venture performance. *Long Range Planning*, *51*(1), 64-81. https://doi.org/10.1016/j.lrp.2017.06.008

Gambardella, A., & McGahan, A. M. (2010). Business-model innovation: General purpose technologies and their implications for industry structure. *Long Range Planning*, 43: 262-271. https://doi.org/10.1016/j.lrp.2009.07.009

Gardner, B. L., Rausser, G. C., Evenson, R. E., & Pingali, P. (Eds.). (2001). *Handbook of Agricultural Economics: Agricultural Development: Farmers, Farm Production and Farm Markets* (Vol. 3). Elsevier.

Gassmann, O., Frankenberger, K., & Csik, M. (2014). *The business model navigator: 55 models that will revolutionise your business*. Pearson UK.

Geissdoerfer, M., Santa-Maria, T., Kirchherr, J., & Pelzeter, C. (2022). Drivers and barriers for circular business model innovation. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.3339

Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). Sustainable business model innovation: A review. *Journal of cleaner production*, *198*, 401-416. https://doi.org/10.1016/j.jclepro.2018.06.240

George, G., & Bock, A. J. (2011). The business model in practice and its implications for entrepreneurship research. *Entrepreneurship theory and practice*, *35*(1), 83-111. https://doi.org/10.1111/j.1540-6520.2010.00424.x

Ghaziani, A., & Ventresca, M. J. (2005, December). Keywords and cultural change: Frame analysis of business model public talk, 1975–2000. In Sociological Forum (Vol. 20, No. 4, pp. 523-559). Kluwer Academic Publishers-Plenum Publishers.

Ghezzi, A., & Cavallo, A. (2020). Agile business model innovation in digital entrepreneurship: Lean startup approaches. *Journal of Business Research*, *110*, 519-537. https://doi.org/10.1016/j.jbusres.2018.06.013

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Organizational research. *Organizational Research Methods*, *16*(1), 15-31.

Glaser, B., & Strauss, A. (1967). Grounded theory: The discovery of grounded theory. Sociology the Journal of the British Sociological Association, 12, 27–49.

Guo, H., Tang, J., Su, Z., & Katz, J. A. (2017). Opportunity recognition and SME performance: The mediating effect of business model innovation. *R&D Management*, *47*(3), 431-442. https://doi.org/10.1111/radm.12219

Gupta, G., & Bose, I. (2019). Strategic learning for digital market pioneering: Examining the transformation of Wishberry's crowdfunding model. *Technological Forecasting and Social Change*, *146*, 865-876. https://doi.org/10.1016/j.techfore.2018.06.020

Halecker, B., Bickmann, R., & Hölzle, K. (2014, June). Failed business model innovation-a theoretical and practical illumination on a feared phenomenon. In *R&D management conference*.

Hallgren, M., & Olhager, J. (2009). Lean and agile manufacturing: external and internal drivers and performance outcomes. *International Journal of Operations & Production Management*, *29*(10), 976-999. https://doi.org/10.1108/01443570910993456

Hamel, G. (2006). The why, what, and how of management innovation. Harvard business review, 84(2), 72.

Hamel, G., & Valikangas, L. (2004). The quest for resilience. *icade. Revista de la Facultad de Derecho*, (62), 355-358.

Heij, C. V., Volberda, H. W., & Van den Bosch, F. A. (2014). How does business model innovation influence firm performance: the effect of environmental dynamism. In *Academy of Management Proceedings* (Vol. 2014, No. 1, p. 16500). Briarcliff Manor, NY 10510: Academy of Management. https://doi.org/10.5465/ambpp.2014.234

Helfat, C. E., & Raubitschek, R. S. (2018). Dynamic and integrative capabilities for profiting from innovation in digital platform-based ecosystems. *Research policy*, *47*(8), 1391-1399. https://doi.org/10.1016/j.respol.2018.01.019

Herrera, M. E. B. (2016). Innovation for impact: Business innovation for inclusive growth. *Journal of Business Research*, *69*(5), 1725-1730. https://doi.org/10.1016/j.jbusres.2015.10.045

Hines, P., Holweg, M., & Rich, N. (2004). Learning to evolve: A review of contemporary lean thinking. *International Journal of Operations & Production Management*, 24(10), 994–1011. https://doi.org/10.1108/01443570410558049

Hock-Doepgen, M., Clauss, T., Kraus, S., & Cheng, C. F. (2021). Knowledge management capabilities and organizational risk-taking for business model innovation in SMEs. *Journal of Business Research*, *130*, 683-697. https://doi.org/10.1016/j.jbusres.2019.12.001

Johnson, D. G. (1996). *The Economics of Agriculture, Volume 2: Papers in Honor of D. Gale Johnson* (Vol. 2). University of Chicago Press.

Johnson, M. W., Christensen, C. M., & Kagermann, H. (2008). Reinventing your business model. *Harvard business review*, *86*(12), 50-59.

Jones, G. M. (1960). Educators, electrons, and business models: A problem in synthesis. *The Accounting Review*, *35*(4), 619.

Jones, O., & Giordano, B. (2021). Family entrepreneurial teams: The role of learning in business model evolution. *Management Learning*, *52*(3), 267-293. https://doi.org/10.1177/1350507620934092

Jyothi, V. E., & Rao, K. N. (2012). Effective implementation of agile practices-incoordination with lean kanban. *International Journal on Computer Science and Engineering*, *4*(1), 87.

Kafetzopoulos, D. (2021). Organizational ambidexterity: antecedents, performance and environmental uncertainty. *Business Process Management Journal*, *27*(3), 922-940. https://doi.org/10.1108/BPMJ-06-2020-0300

Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2020). Customer experience driven business model innovation. *Journal of Business Research*, *116*, 431-440. https://doi.org/10.1016/j.jbusres.2019.08.003

Keupp, M. M., & Gassmann, O. (2009). The past and the future of international entrepreneurship: a review and suggestions for developing the field. *Journal of management*, *35*(3), 600-633. https://doi.org/10.1177/0149206308330558

Keupp, M. M., Palmié, M., & Gassmann, O. (2012). The strategic management of innovation: A systematic review and paths for future research. *International journal of management reviews*, *14*(4), 367-390. https://doi.org/10.1111/j.1468-2370.2011.00321.x

Khan, I. S., Ahmad, M. O., & Majava, J. (2021). Industry 4.0 and sustainable development: A systematic mapping of triple bottom line, Circular Economy and Sustainable Business Models perspectives. *Journal of Cleaner Production*, *297*, 126655. https://doi.org/10.1016/j.jclepro.2021.126655

Khanagha, S., Volberda, H., & Oshri, I. (2014). Business model renewal and ambidexterity: Structural alteration and strategy formation process during transition to a Cloud business model. *R&D Management*, 44: 322-340. https://doi.org/10.1111/radm.12070

Kim, S. K., & Min, S. (2015). Business model innovation performance: when does adding a new business model benefit an incumbent?. *Strategic Entrepreneurship Journal*, *9*(1), 34-57. https://doi.org/10.1002/sej.1193

Kim, S., Lee, G., & Kang, H. G. (2021). Risk management and corporate social responsibility. *Strategic Management Journal*, *42*(1), 202-230. https://doi.org/10.1002/smj.3224

Kim, W. C., & Mauborgne, R. (2014). *Blue ocean strategy, expanded edition: How to create uncontested market space and make the competition irrelevant*. Harvard business review Press.

Klein, S. P., Spieth, P., & Heidenreich, S. (2021). Facilitating business model innovation: The influence of sustainability and the mediating role of strategic orientations. *Journal of Product Innovation Management*, *38*(2), 271-288. https://doi.org/10.1111/jpim.12563

Klein, S., Schneider, S., & Spieth, P. (2021). How to stay on the road? A business model perspective on mission drift in social purpose organizations. *Journal of Business Research*, *125*, 658-671. https://doi.org/10.1016/j.jbusres.2020.01.053

Kohler, T. (2015). Crowdsourcing-based business models: How to create and capture value. *California Management Review*, *57*(4), 63-84. https://doi.org/10.1525/cmr.2015.57.4.63

Kossyva, D., Theriou, G., Aggelidis, V., & Sarigiannidis, L. (2023). Retaining talent in knowledge-intensive services: enhancing employee engagement through human resource, knowledge and change management. *Journal of Knowledge Management*. https://doi.org/10.1108/JKM-03-2022-0174

Latifi, M. A., Nikou, S., & Bouwman, H. (2021). Business model innovation and firm performance: Exploring causal mechanisms in SMEs. *Technovation*, *107*, 102274. https://doi.org/10.1016/j.technovation.2021.102274

Lecocq, X., Demil, B., & Ventura, J. (2010). Business models as a research program in strategic management: An appraisal based on Lakatos. *M@n@gement*, *13*(4), 214-225. https://doi.org/10.3917/mana.134.0214

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., ...& Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of

studies that evaluate health care interventions: explanation and elaboration. *Journal of clinical epidemiology*, *62*(10), e1-e34. https://doi.org/10.1016/j.jclinepi.2009.06.006

Linde, L., Frishammar, J., & Parida, V. (2021). Revenue models for digital servitization: a value capture framework for designing, developing, and scaling digital services. *IEEE Transactions on Engineering Management*. https://doi.org/10.1109/TEM.2021.3053386

Liu, J., Tong, T. W., & Sinfield, J. V. (2021). Toward a resilient complex adaptive system view of business models. *Long Range Planning*, *54*(3), 102030. https://doi.org/10.1016/j.lrp.2020.102030

Loon, M., Otaye-Ebede, L., & Stewart, J. (2020). Thriving in the new normal: The HR microfoundations of capabilities for business model innovation. An integrated literature review. *Journal of Management Studies*, *57*(3), 698-726. https://doi.org/10.1111/joms.12564

Lopez, F. J. D., Bastein, T., & Tukker, A. (2019). Business model innovation for resource-efficiency, circularity and cleaner production: What 143 cases tell us. *Ecological Economics*, *155*, 20-35. https://doi.org/10.1016/j.ecolecon.2018.03.009

Lubik, S., & Garnsey, E. (2016). Early business model evolution in science-based ventures: the case of advanced materials. *Long Range Planning*, *49*(3), 393-408. https://doi.org/10.1016/j.lrp.2015.03.001

Magnani, G., & Gioia, D. (2023). Using the Gioia Methodology in international business and entrepreneurship research. *International Business Review*, *32*(2), 102097. https://doi.org/10.1016/j.ibusrev.2022.102097

Marinesi, S., Girotra, K., & Netessine, S. (2018). The operational advantages of threshold discounting offers. *Management Science*, *64*(6), 2690-2708. https://doi.org/10.1287/mnsc.2017.2740

Markides, C. (2006). Disruptive innovation: In need of better theory. Journal of Product Innovation Management, 23: 19-25. https://doi.org/10.1111/j.1540-5885.2005.00177.x

Markides, C. (2013). Business model innovation: what can the ambidexterity literature teach us?. *Academy of Management Perspectives*, 27(4), 313-323. https://doi.org/10.5465/amp.2012.0172

Martignoni, D., Keil, T., & Lang, M. (2020). Focus in searching core–periphery structures. *Organization Science*, *31*(2), 266-286. https://doi.org/10.1287/orsc.2019.1309

Mason-Jones, R., Naylor, B., & Towill, D. R. (2000). Lean, agile or leagile? Matching your supply chain to the marketplace. *International Journal of Production Research*, *38*(17), 4061-4070. https://doi.org/10.1080/00207540050204920

Massa, L., Tucci, C. L., & Afuah, A. (2017). A critical assessment of business model research. *Academy of Management Annals*, *11*(1), 73-104. https://doi.org/10.5465/annals.2014.0072

Mason, J. (2017). Qualitative researching. *Qualitative researching*, 1-288.

McKinsey Global Survey, 2014. The digital tipping point: McKinsey Global Survey results, *McKinsey Global Survey*, NJ, Available at: www.mckinsey.com/business-functions/digital-mckinsey/our-insights/the-digital-tipping-point-mckinsey-global-survey-results (accessed January 3, 2021).

Meredith, J. (1998). Building operations management theory through case and field research. *Journal of Operations Management*, 16(4), 441–454. https://doi.org/10.1016/S0272-6963(98)00023-0

Miller, J. E., & Brown, E. K. (2013). *The Cambridge dictionary of linguistics*. Cambridge University Press.

Moroz, P. W., & Gamble, E. N. (2021). Business model innovation as a window into adaptive tensions: Five paths on the B Corp journey. *Journal of Business Research*, *125*, 672-683. https://doi.org/10.1016/j.jbusres.2020.01.046

Naylor, J. B., Naim, M. M., & Berry, D. (1999). Leagility: Integrating the lean and agile manufacturing paradigms in the total supply chain. *International Journal of production economics*, *62*(1-2), 107-118. https://doi.org/10.1016/S0925-5273(98)00223-0

Nelson, R. R. (2009). *An evolutionary theory of economic change*. harvard university press.

Nobre, F. S., & Morais-da-Silva, R. L. (2021). Capabilities of bottom of the pyramid organizations. *Business & Society*, 00076503211001826. https://doi.org/10.1177/00076503211001826

Norris, S., Hagenbeck, J., & Schaltegger, S. (2021). Linking sustainable business models and supply chains—Toward an integrated value creation framework. *Business Strategy and the Environment*, *30*(8), 3960-3974. https://doi.org/10.1002/bse.2851

Norton, G. W., Alwang, J., & Masters, W. A. (2021). *Economics of agricultural development: world food systems and resource use*. Routledge.

Oliveira-Dias, D., Maqueira-Marín, J. M., & Moyano-Fuentes, J. (2022). The link between information and digital technologies of industry 4.0 and agile supply chain: Mapping current research and establishing new research avenues. *Computers & Industrial Engineering*, *167*, 108000. https://doi.org/10.1016/S0272-6963(98)00023-0

Osterwalder, A. (2004). *The business model ontology a proposition in a design science approach* (Doctoral dissertation, Université de Lausanne, Faculté des hautes études commerciales).

Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. John Wiley & Sons.

Osterwalder, A., Pigneur, Y., & Tucci, C. L. (2005). Clarifying business models: Origins, present, and future of the concept. *Communications of the association for Information Systems*, *16*(1), 1. https://doi.org/10.17705/1CAIS.01601

Patel P.C., Messersmith J.G., & Lepak D.P. (2013). Walking the tightrope: an assessment of the relationship between high-performance work systems and organizational ambidexterity. *Academy of Management Journal* Vol. 56, No. 5, 1420–1442. https://doi.org/10.5465/amj.2011.0255

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health services research*, *34*(5 Pt 2), 1189.

Patzelt, H., Zu Knyphausen-Aufseß, D., & Nikol, P. (2008). Top management teams, business models, and performance of biotechnology ventures: An upper echelon perspective. *British Journal of Management*, *19*(3), 205-221. https://doi.org/10.1111/j.1467-8551.2007.00552.x

Penrose, E. T. (1959). *The Theory of the Growth of the Firm.* New York: John Wiley.

Piscicelli, L., Ludden, G. D., & Cooper, T. (2018). What makes a sustainable business model successful? An empirical comparison of two peer-to-peer goods-sharing platforms. *Journal of cleaner production*, *172*, 4580-4591. https://doi.org/10.1016/j.jclepro.2017.08.170

Pitelis, C. N. (2022). Dynamic capabilities, the new multinational enterprise and business model innovation: A de/re-constructive commentary. *Journal of International Business Studies*, 1-13. https://doi.org/10.1057/s41267-022-00518-6

Pettigrew, A. M. (1990). Longitudinal field research on change: Theory and practice. *Organization science*, *1*(3), 267-292. https://doi.org/10.1287/orsc.1.3.267

Pizzi, S., Corbo, L., & Caputo, A. (2021). Fintech and SMEs sustainable business models: Reflections and considerations for a circular economy. *Journal of Cleaner Production*, *281*, 125217. https://doi.org/10.1016/j.jclepro.2020.125217

Priem, R. L., & Butler, J. E. (2001). Tautology in the resource-based view and the implications of externally determined resource value: Further comments. *Academy of Management review*, *26*(1), 57-66. https://doi.org/10.5465/amr.2001.4011946

Qumer, A., & Henderson-Sellers, B. (2006, July). Comparative evaluation of XP and Scrum using the 4D Analytical Tool (4-DAT). In *Proceedings of the European and Mediterranean conference on information systems* (pp. 1-8).

Reiter Affiliated Companies (2024 January) Retrieved from https://www.berry.net

Ramdani, B., Binsaif, A., Boukrami, E., & Guermat, C. (2020). Business models innovation in investment banks: a resilience perspective. *Asia Pacific Journal of Management*, 1-28. http://doi.org/10.1007/s10490-020-09723-z

Ricciardi, F., Zardini, A., & Rossignoli, C. (2016). Organizational dynamism and adaptive business model innovation: The triple paradox configuration. *Journal of Business Research*, *69*(11), 5487-5493. https://doi.org/10.1016/j.jbusres.2016.04.154

Ries, E. (2011). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. Currency.

Rigby, D. K., Sutherland, J., & Takeuchi, H. (2016). Embracing agile. *Harvard Business Review*, 94(5), 40–50.

Saldaña, J. (2009). An introduction to codes and coding. *The Coding Manual for Qualitative Researchers*, 3.

Saldaña, J. (2021). *The coding manual for qualitative researchers*. sage.

Sanasi, S., Manotti, J., &Ghezzi, A. (2021). Achieving Agility in High-Reputation Firms: Agile Experimentation Revisited. *IEEE Transactions on Engineering Management*. http://doi.org/10.1109/TEM.2021.3128865

Sanchez, P., & Ricart, J. E. (2010). Business model innovation and sources of value creation in low-income markets. *European management review*, *7*(3), 138-154. https://doi.org/10.1057/emr.2010.16

Santa-Maria, T., Vermeulen, W. J., & Baumgartner, R. J. (2021). How do incumbent firms innovate their business models for the circular economy? Identifying micro-foundations of dynamic capabilities. *Business Strategy and the Environment*. https://doi.org/10.1002/bse.2956

Santos, J., Spector, B., & Van der Heyden, L. (2009). *Toward a theory of business model innovation within incumbent firms* (Working Paper No. 16). Fontainebleau, France: INSEAD.

Schaarschmidt, M., Walsh, G., & Evanschitzky, H. (2021). Hybrid Offerings Sales Capability: Conceptualization, Scale Development and Validation. *British Journal of Management*. https://doi.org/10.1111/1467-8551.12527

Schaltegger, S., Hansen, E. G., & Lüdeke-Freund, F. (2016). Business models for sustainability: Origins, present research, and future avenues. *Organization & Environment*, *29*(1), 3-10. https://doi.org/10.1177/1086026615599806

Schindehutte, M., Morris, M. H., & Kocak, A. (2008). Understanding market-driving behavior: the role of entrepreneurship. *Journal of small business management*, *46*(1), 4-26. http://doi.org/10.1111/j.1540-627X.2007.00228.x

Schneckenberg, D., Velamuri, V. K., Comberg, C., & Spieth, P. (2017). Business model innovation and decision making: uncovering mechanisms for coping with uncertainty. *R&D Management*, *47*(3), 404-419. https://doi.org/10.1111/radm.12205

Schneider, S., & Spieth, P. (2013). Business model innovation: Towards an integrated future research agenda. *International Journal of Innovation Management*, *17*(01), 1340001. https://doi.org/10.1142/S136391961340001X

Schoemaker, P. J., Heaton, S., & Teece, D. (2018). Innovation, dynamic capabilities, and leadership. *California Management Review*, *61*(1), 15-42.

Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business*. Cambridge, MA: Harvard University Press.

Schumpeter, J., 1942. Capitalism, Socialism, and Democracy, second ed. Harper, New York, NY.

Scuotto, V., Del Giudice, M., & Carayannis, E. G. (2017). The effect of social networking sites and absorptive capacity on SMES'innovation performance. *The Journal of Technology Transfer*, *42*(2), 409-424. https://doi.org/10.1007/s10961-016-9517-0

Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. Academy of management review, 32(1), 273-292. https://doi.org/10.5465/amr.2007.23466005

Sjödin, D., Parida, V., Jovanovic, M., & Visnjic, I. (2020). Value creation and value capture alignment in business model innovation: A process view on outcome-based business models. *Journal of Product Innovation Management*, *37*(2), 158-183. https://doi.org/10.1111/jpim.12516

Sjödin, D., Parida, V., Palmié, M., & Wincent, J. (2021). How AI capabilities enable business model innovation: Scaling AI through co-evolutionary processes and feedback loops. *Journal of Business Research*, *134*, 574-587. https://doi.org/10.1016/j.jbusres.2021.05.009

Snihur, Y., & Zott, C. (2020). The genesis and metamorphosis of novelty imprints: How business model innovation emerges in young ventures. *Academy of Management Journal*, *63*(2), 554-583. https://doi.org/10.5465/amj.2017.0706

Snihur, Y., Thomas, L. D., & Burgelman, R. A. (2018). An ecosystem-level process model of business model disruption: The disruptor's gambit. *Journal of Management Studies*, *55*(7), 1278-1316. https://doi.org/10.1111/joms.12343

Sohl, T., Vroom, G., & McCann, B. T. (2020). Business model diversification and firm performance: A demand-side perspective. *Strategic entrepreneurship journal*, *14*(2), 198-223. https://doi.org/10.1002/sej.1342

Soluk, J., Miroshnychenko, I., Kammerlander, N., & De Massis, A. (2021). Family influence and digital business model innovation: the enabling role of dynamic capabilities. *Entrepreneurship Theory and Practice*, *45*(4), 867-905. https://doi.org/10.1177/1042258721998946

Sorescu, A. (2017). Data-driven business model innovation. *Journal of Product Innovation Management*, *34*(5), 691-696. https://doi.org/10.1111/jpim.12398

Sorescu, A., Frambach, R. T., Singh, J., Rangaswamy, A., & Bridges, C. (2011). Innovations in retail business models. *Journal of retailing*, *87*, S3-S16. https://doi.org/10.1016/j.jretai.2011.04.005

Sosna, M., Trevinyo-Rodríguez, R. N., & Velamuri, S. R. (2010). Business model innovation through trial-and-error learning: The Naturhouse case. *Long range planning*, *43*(2-3), 383-407. https://doi.org/10.1016/j.lrp.2010.02.003

Spieth, P., Schneckenberg, D., & Matzler, K. (2016). Exploring the linkage between business model (&) innovation and the strategy of the firm. *R&D Management*, *46*(3), 403-413. https://doi.org/10.1111/radm.12218

Spieth, P., Schneckenberg, D., & Ricart, J. E. (2014). Business model innovation–state of the art and future challenges for the field. *R&d Management*, *44*(3), 237-247. https://doi.org/10.1111/radm.12071

Sternad, D., & Mödritscher, G. (2020). Entrepreneurial Leaps: Growth Processes in Transition Phases Between Dynamic States. *Entrepreneurship Theory and Practice*, 1042258720929890. https://doi.org/10.1177/1042258720929890

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research. Thousands Oaks*. CA: Sage.

Suddaby, R. (2010). Editor's comments: Construct clarity in theories of management and organization. *Academy of Management Journal*, 35: 346-357. https://doi.org/10.5465/amr.35.3.zok346

Swatman, P. M., Krueger, C., & Van Der Beek, K. (2006). The changing digital content landscape: An evaluation of e-business model development in European online news and music. *Internet research*. HTTP://doi.org/10.1108/10662240610642541

Tabuchi, H. (2023, December 29). In California, Farmers Pay a High Price for Water. Is It a Model for the Nation? The New York Times. https://www.nytimes.com/interactive/2023/12/29/climate/california-farmers-watertax.html. Accessed January 20, 2024.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, *28*(13), 1319-1350. https://doi.org/10.1002/smj.640

Teece, D. J. (2010). Business models, business strategy and innovation. *Long range planning*, *43*(2-3), 172-194. https://doi.org/10.1016/j.lrp.2009.07.003

Teece, D. J. (2018). Business models and dynamic capabilities. *Long range planning*, *51*(1), 40-49. https://doi.org/10.1016/j.lrp.2017.06.007

Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18: 509-533. https://doi.org/10.1002/

Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: a resource-based view. *Strategic Management Journal*, 31(8), 892-902. https://doi.org/10.1002/smj.841

Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological theory*, *30*(3), 167-186. https://doi.org/10.1177/0735275112457914

To, C. K., Au, J. S., & Kan, C. W. (2019). Uncovering business model innovation contexts: A comparative analysis by fsQCA methods. *Journal of Business Research*, *101*, 783-796. https://doi.org/10.1016/j.jbusres.2018.12.042

Todeschini, B. V., Cortimiglia, M. N., Callegaro-de-Menezes, D., & Ghezzi, A. (2017). Innovative and sustainable business models in the fashion industry: Entrepreneurial drivers, opportunities, and challenges. *Business horizons*, *60*(6), 759-770 https://doi.org/10.1016/j.bushor.2017.07.003

Todeschini, B. V., Cortimiglia, M. N., & de Medeiros, J. F. (2020). Collaboration practices in the fashion industry: Environmentally sustainable innovations in the value chain. *Environmental Science & Policy*, *106*, 1-11. https://doi.org/10.1016/j.envsci.2020.01.003

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. Br. J. Manag. 14 (3), 207–222. https://doi.org/10.1111/1467-8551.00375

Ujwary-Gil, A., & Potoczek, N. R. (2020). A dynamic, network and resource-based approach to the sustainable business model. *Electronic Markets*, *30*(4), 717-733. https://doi.org/10.1007/s12525-020-00431-6

United Nations, (2015). *UN General Assembly Transforming our World: The 2030 Agenda for Sustainable Development* A/RES/70/1. https://sdgs.un.org/2030agenda

Unterfrauner, E., Shao, J., Hofer, M., & Fabian, C. M. (2019). The environmental value and impact of the Maker movement—Insights from a cross-case analysis of European maker initiatives. *Business Strategy and the Environment*, *28*(8), 1518-1533. https://doi.org/10.1002/bse.2328

Van Maanen, J. (1979). The fact of fiction in organizational ethnography. *Administrative Science Quarterly*, 24(4), 539–550. https://doi.org/10.2307/2392360

Velter, M. G. E., Bitzer, V., Bocken, N. M. P., & Kemp, R. (2020). Sustainable business model innovation: The role of boundary work for multi-stakeholder alignment. *Journal of Cleaner Production*, *247*, 119497. https://doi.org/10.1016/j.jclepro.2019.119497

Verhagen, M., de Reuver, M., & Bouwman, H. (2021). Implementing Business Models Into Operations: Impact of Business Model Implementation on Performance. *IEEE Transactions on Engineering Management*. https://doi.org/10.1109/TEM.2020.3046365

Vernay, A. L., Cartel, M., & Pinkse, J. (2022). Mainstreaming business models for sustainability in mature industries: Leveraging alternative institutional logics for optimal distinctiveness. *Organization & Environment*, 10860266221079406. https://doi.org/10.1177/10860266221079406

Visnjic, I., & Van Looy, B. (2013). Servitization: Disentangling the impact of service business model innovation on manufacturing firm performance. *Journal of operations management*, *31*(4), 169-180. https://doi.org/10.1016/j.jom.2013.02.001

Visnjic, I., Wiengarten, F., & Neely, A. (2016). Only the brave: Product innovation, service business model innovation, and their impact on performance. *Journal of product innovation management*, *33*(1), 36-52. https://doi.org/10.1111/jpim.12254

Warlop, L., & Alba, J. W. (2004). Sincere flattery: Trade-dress imitation and consumer choice. *Journal of consumer Psychology*, *14*(1-2), 21-27. https://doi.org/10.1207/s15327663jcp1401&2_4

Warner, K. S., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long range planning*, *52*(3), 326-349. https://doi.org/10.1016/j.lrp.2018.12.001

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, *5*(2), 171-180. https://doi.org/10.1002/smj.4250050207

Whalen, K. A. (2019). Three circular business models that extend product value and their contribution to resource efficiency. *Journal of cleaner production*, *226*, 1128-1137. https://doi.org/10.1016/j.jclepro.2019.03.128

Williamson, O. E. (1979). Transaction-cost economics: the governance of contractual relations. *The journal of Law and Economics*, *22*(2), 233-261. https://doi.org/10.1086/466942

Wirtz, B. W., Pistoia, A., Ullrich, S., & Gottel, V. (2016). Business models: Origin, development and future research. *Long Range Planning*, 49: 36-54. https://doi.org/10.1016/j.lrp.2015.04.001

Wirtz, B. W., Schilke, O., & Ullrich, S. (2010). Strategic development of business models: implications of the Web 2.0 for creating value on the internet. *Long range planning*, *43*(2-3), 272-290. https://doi.org/10.1016/j.lrp.2010.01.005

Womack, J. P., & Jones, D. T. (1997). Lean thinking - Banish waste and create wealth in your corporation. *Journal of the Operational Research Society*, 48(11), 1148. https://doi.org/10.1057/palgrave.jors.2600967

Wu, X., Ma, R., & Shi, Y. (2010). How do latecomer firms capture value from disruptive technologies? A secondary business-model innovation perspective. *IEEE Transactions on Engineering Management*, *57*(1), 51-62.

Yin, R. (1984). Case study research. Beverly Hills CA: Sage.

Zhang, H., Xiao, H., Wang, Y., Shareef, M. A., Akram, M. S., & Goraya, M. A. S. (2021). An integration of antecedents and outcomes of business model innovation: A meta-analytic review. *Journal of Business Research*, *131*, 803-814. https://doi.org/10.1016/j.jbusres.2020.10.045

Zollo, M., Cennamo, C., & Neumann, K. (2013). Beyond what and why: Understanding organizational evolution towards sustainable enterprise models. *Organization & Environment*, *26*(3), 241-259. https://doi.org/10.1177/1086026613496433

Zott, C., & Amit, R. (2007). Business model design and the performance of entrepreneurial firms. *Organization science*, *18*(2), 181-199. https://doi.org/10.1287/orsc.1060.0232

Zott, C., & Amit, R. (2008). The fit between product market strategy and business model: Implications for firm performance. *Strategic management journal*, *29*(1), 1-26. https://doi.org/10.1002/smj.642

Zott, C., & Amit, R. (2009). The business model as the engine of network-based strategies. *The network challenge*, 259-275.

Zott, C., & Amit, R. (2010). Business model design: An activity system perspective. *Long range planning*, *43*(2-3), 216-226. https://doi.org/10.1016/j.lrp.2009.07.004

Zott, C., Amit, R., & Massa, L. (2011). The business model: recent developments and future research. *Journal of management*, *37*(4), 1019-1042. https://doi.org/10.1177%2F0149206311406265

Appendixes

Appendix A: Interviews Script

This interview is part of my research about Business Model Innovation in Agribusiness industry. Your corporation was pre-selected, and your individual opinion will be part of the study of your corporation.
The results will be used only for academic purposes.
There are no right or wrong answers. Your sincere opinion will be valued and will improve the quality of this study.
For any clarification, you may contact me (rsbxl@iscte-iul.pt / +351 915 483 397) or contact ISCTE (+351 210 464 416).
Thank you in advance for your cooperation.

Original business Model configuration

- What was your value proposition?
- Who were your initial target customers?
- How did you organize your corporation to create and deliver your value proposition to customers? What were the key operations and processes, your resources and competencies, and were any third parties involved in the value creation and delivery processes?
- Were you already making a profit?

  o If yes, how? What were your revenue model and revenue stream? What operations contributed to the value capturing process most?

New Business Model configuration

New Business Model Configuration

- What is your (current) value proposition?
- Who are your customers?
- How is your corporation organized in order to create and deliver your value proposition to your customers? What are the key operations and processes, your resources and competencies, and are any third parties involved in the value creation and delivery processes?
- Are you making a profit?
  - If yes, how? What are your revenue model and revenue stream? What operations are contributing to the value capturing process?
- What is your cost structure?

Key Business Model Changes

- What are the main changes to your corporation concerning the way you create value? (For instance, have you changed your value proposition, value creating operations, resources and competencies, third party relationships and/or your target customers?). Why did you make these changes?

- What are the main changes to your corporation concerning the way you deliver value? (For instance, have you changed your distribution channels and/or the way you interact with your customers?). Why did you make these changes?
- What are the main changes to your corporation concerning the way you capture value? (For instance, have you changed your revenue model and/or cost structure?). Why did you make these changes?

Business Model Innovation Process (step and constituent elements)

- How did you identify the problem and the need for making changes to your previous BM configuration? Did you employ any methodology, model, approach, tool or instrument to support and enable this process?
- How did you reach a solution? How did you know it was the right solution? Did you employ any methodology, model, approach, tool or instrument to support and enable this process?
- Can you describe the difficulties you had to manage during the process of identifying the problems and finding a solution?
- How did you make the changes needed to your business model? Did you employ any methodology, model, approach, tool or instrument to support and enable this process?
- Can you describe the difficulties you had to manage during the process of implementing the identified solution?
- How would you define the changes introduced to your innovated business model? Radical or incremental?
- Have these changes made an impact at the strategic or operational level in your digital startup?
- What would you say were the most critical steps, elements and concepts that best describe this process of Business Model Innovation within your early stage digital startup?

(Ghezzi & Cavallo, 2020 adapted)

1. What is the objective of the new business model? In other words, what perceived needs would be satisfied through the design of a new activity system?
2. What novel activities are needed to satisfy the perceived needs? (Business model content.)
3. How could these activities be linked to each other in novel ways? (Business model structure.)
4. Who should perform each of the activities that are part of the business model (eg., the focal firm, or a partner), and what novel governance arrangements could enable this structure? (Business model governance.)
5. How is value created through the novel business model for each of the partners?
6. What focal firm's revenue model will allow it to appropriate part of the value created from the new business model?

(Zott & Amit, 2010, adapted)