Louvain School of Management

and Instituto Superior Técnico

# *Innovation Sourcing Strategies*

## A Multiple Case Study Approach in the Portuguese Beverage Industry

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# Abstract

Innovation Sourcing Strategies refer to the practices employed to acquire and integrate essential knowledge for new products, services, and processes from external sources, rather than relying solely on internal development. This thesis investigates the perception, implementation, and outcomes of such strategies in the Portuguese beverage industry.

The research started with a literature review on the topic. The methodology included analyzing four case studies of major companies in the Portuguese beverage sector. Professionals in innovation-related roles were interviewed based on the literature review's findings to gather valuable insights into how these companies balance in-house and open innovation.

Main findings include that, compared to B2B companies, B2C companies engage in more specialised commercialization innovation, which involves developing creative strategies for bringing new products to market, such as product placement and marketing campaigns. Their close and continuous connection with customers provides richer data insights for decision-making.

Small and medium-sized companies avoid fully outsourcing innovation by purchasing it externally, preferring long-term partnerships, while major players within international groups may buy innovation when seeking specific characteristics, leveraging their substantial financial and human resources. Additionally, in the past, only these major groups had venture departments to invest in startups, but this trend has recently extended to medium-sized companies as well.

Firms with multiple core products face a more complex innovation process, due to managing numerous simultaneous projects with distinct initiatives, in contrast to single-product firms.

These findings underscore the growing importance of innovation sourcing, given their evolving nature in recent years and the highlighted importance of involving external stakeholders in the innovation process, recognizing that not all necessary knowledge can be sourced internally.

**Keywords:** innovation sourcing; Portuguese beverage industry; in-house innovation; open innovation; collaborative development; knowledge integration.

# Contents

# Chapter 1

# Introduction

In today's competitive environment, continuous innovation has emerged as a crucial necessity. Across various sectors, more than half of current revenues are derived from newly created products or services, making innovation a strategic driver of growth. Organisations actively pursue innovation, meaning new or enhanced approaches, products, or procedures that result in higher performance (Heindenreich & Kraemer, 2016).

Collaborative development within supply chains is becoming a more prevalent source of innovation, with numerous external partners like suppliers playing a key role. Companies are challenged in creating new products or services at a speed to meet the demands of the competitive market and, as a consequence, they lean on external entities for assistance in this endeavour (Kostopoulos et al. 2011; Rosell & Lakemond, 2012).

Therefore, innovation is increasingly the result of collective effort rather than a product of a single firm. Increased connections to external partners, such as suppliers, customers, and universities are considered to lead to better innovation outcomes (Pihlajamaaa et al., 2017).

This Master's Thesis will explore the integration of innovation sourcing strategies within the Portuguese beverage production sector. The goal is to understand how companies manage innovation, particularly in combining external knowledge from stakeholders with their internal resources, as failure to do so could result in falling behind. The thesis will also address the challenges associated with this evolving trend.

The research question to be answered is “How do beverage production companies perceive and implement innovation sourcing, and what are the results of these efforts?”.

The methodology will involve conducting interviews with Portuguese beverage companies to explore the varied perspectives and approaches they take toward innovation. The objective is to highlight both the similarities and differences in the innovation sourcing strategies employed by different companies through a comparative analysis. This will help identify patterns and infer the impact of various company types on their innovation sourcing processes, explaining how specific characteristics lead to different outcomes. The findings will allow for the formulation of propositions that elucidate these causal relationships.

The remainder of this dissertation is organised as follows. Chapter 2 reviews the relevant literature, in particular the definition of innovation sourcing, its benefits, implementation practices, and challenges. This chapter also summarises key insights from the literature, identifies existing gaps, and explains how this dissertation addresses those gaps. The insights gained from the literature review built the structure of the interviews, ensuring that they focused on relevant topics and filled identified gaps. Chapter 3 describes the methodology employed, justifying its selection, and the data analysis process, including the reliability and validity tests used to ensure the quality of the research design. Chapter 4 presents each case study, highlighting the unique aspects of each company's innovation structure and explaining how they balance in-house and open innovation. Chapter 5 offers a cross-case analysis, comparing the cases to identify propositions that link company characteristics to general outcomes in innovation sourcing. This chapter also includes a discussion comparing the findings with the literature, offering possible explanations for any differences. Finally, Chapter 6 concludes the dissertation, discussing the limitations encountered and providing recommendations for future research. The References and Appendix are provided at the end of the dissertation.

# Chapter 2

# Literature Review

Prior to exploring innovation sourcing strategies within the Portuguese beverage sector, a review of the state-of-the-art literature in the field is conducted.

This review serves as a foundational step to identify gaps in existing knowledge, ensuring a clear understanding of both explored and unaddressed areas. This understanding facilitates the direction of the study towards these gaps, enabling a relevant contribution to the exploration of innovation sourcing strategies.

## 2.1 Innovation Sourcing Definition and Benefits

Innovation sourcing is defined as the acquisition and integration of critical knowledge for new products, services, and processes from external providers, rather than relying solely on internal development. Sourcing processes can be applied to complement internal design capabilities with external knowledge and ultimately improve innovation performance. Firms use this external knowledge to enhance products and services, gain market share, and improve profit. This process strengthens innovation efforts within a firm by actively seeking valuable ideas and solutions from upstream external providers. These insights can subsequently be applied to align with customer value expectations (Schmelzle & Tate, 2017).

Indeed, sourcing external innovation is now a necessary driving force. Gone are the days when one firm had all the capabilities it needed to innovate its way into the market. The complexity of contemporary products and the expectations of consumers create disparities between a firm's innovation needs and its internal capacities (Slowinski et al., 2009).

Establishing innovation sourcing practices within a company requires constant scanning for new ideas in methods, products, and practices from upstream supply chain members. With innovation sourcing, organisations are acquiring valuable insights by tapping into a collaborative network within the supply chain that bolsters the focal organisation's objectives (Gallego et. al, 2013). According to Gassman & Enkel (2004), an organisation's formal boundaries are converted "into a more semi-permeable membrane that enables knowledge to move more easily between the external environment and the company's internal innovation process".

The innovation sourcing process involves identifying, accessing and leveraging innovation opportunities that arise from existing or potential supply chain members. It occurs when leaders recognize that the key to future success lies in their present capability to leverage networks of external contributors (Linder et al., 2003).

As global value chains have become more fragmented, change and opportunities emerge from various directions. As a result, companies must excel in seizing innovation opportunities by collaborating effectively with both existing and potential members within their supply chain (Legenvre & Gualandris, 2018).

Furthermore, the sourcing of external knowledge enables organisations to strategically share development risks and costs with other organisations. Proficient management of interorganizational innovation can yield enhanced innovation performance, manifesting in substantially shorter time to market, improved product quality, and reduced development costs (Schmelzle & Tate, 2017).

Various startups and a multitude of mid-size companies have been showcasing their capacity to introduce innovative ideas to the market. Their contributions extend beyond the creation of products and new technologies — they also bring new distribution channels, new processes, and new business models. At times, these entities disrupt established markets, while in other instances, they complement existing offers. The simultaneous occurrence of these two trends generates a constant stream of opportunities that established companies find challenging to capture. The influx of new ideas, information, resources, and technological solutions can bring value to a company (Choi et al., 2015; Möller & Törrönen, 2003).

Maintaining an internally focused mentality that relies exclusively on in-house Research and Development (R&D) limits competitiveness and neglects external knowledge from the supply network. Such an approach is arduous because it places undue strain on the organisation to tackle all challenges solely through internal resources. Firms often lack the necessary proficiency to address every challenge that arises (Cantarello et al., 2011).

For these reasons, the use of external sources for help with innovation is gaining prominence, with a growing inclination towards cooperative sharing among partners in the supply network. Businesses are actively engaging external sources throughout the entire innovation process, from initial discovery and development to commercialization and even product maintenance. The need to innovate with outsiders has led companies to tap various external sources, ranging from user communities to collaborating with competitors (Linder et al., 2003). However, the innovation potential that has drawn more attention is from suppliers (Un et al., 2010).

The potential of involving suppliers in the innovation process has been widely recognised by research related to collaborative innovation between a buyer and a supplier. Suppliers emerge as pivotal innovation partners, playing a crucial role in enhancing the benefits derived from innovation sourcing. Recognising this, companies are increasingly seeking ways to leverage their suppliers' innovation potential (Johnsen, 2009; Smals & Smits, 2012).

The innovation potential of suppliers is strengthened by their familiarity with their customers' needs and their established position, which often comes with existing mechanisms for knowledge transfer. In the face of increasing competition across various industries, companies are not just turning to heir suppliers for products and services but increasingly relying on them as valuable sources of ideas and innovations (Luzzini et al., 2015; Philips et al., 2006).

Ultimately, Schmelzle & Tate (2017) conducted a systematic literature review on innovation sourcing that synthesized the body of knowledge regarding innovation sourcing. One noteworthy outcome of this study was the identification of three key dimensions of innovation sourcing, visually represented in Figure 2.1. These three dimensions were consistently identified across the literature and were observed in real examples of innovation sourcing practices. Importantly, they were found to be positively associated with innovation performance, underscoring their significance as factors to be considered and developed in companies' strategies for success.

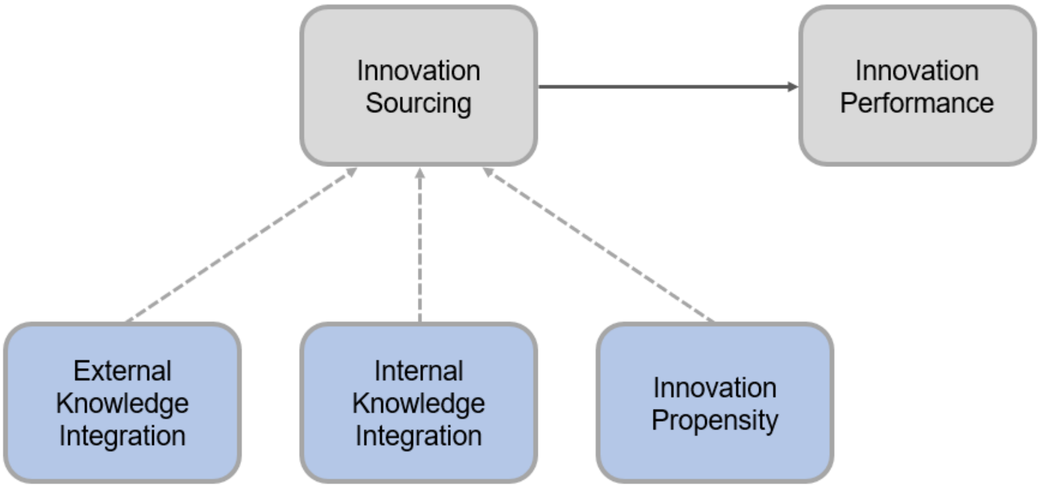


Figure 2.1: Conceptual Framework of Innovation Sourcing Key Dimensions (Source: Schmelzle & Tate, 2017)

1. **External Knowledge Integration** refers to the effective usage and leveraging of ideas or solutions provided by external sources for the benefit of companies. This searching and scanning process involves a set of organizational practices designed to monitor market developments and identify opportunities that could yield potential benefits for the organization. These practices include establishing formal or informal arrangements with external entities to access vital knowledge and implementing a scouting mechanism to enhance awareness of industry trends.

2. **Internal Knowledge Integration** must be sufficiently retained by organizations as the trend of sourcing innovation from external sources continues to grow. Merely acquiring external knowledge is insufficient, as external and internal innovation capabilities complement each other. External sources may lack crucial “local or contextual knowledge of markets, supply chains, and firm-specific factors”. Simultaneously, organizations need to uphold the capacity to evaluate external knowledge and subsequently enhance its internal foundation through effective knowledge integration practices.

3. **Innovation Propensity** denotes the inclination to actively pursue, acquire, and exploit advantageous new ideas from external sources to enhance internal innovation processes. This encompasses a wide range of constructs related to mindset, attitude, or predisposition that contribute to supporting organizational innovation activities.

## 2.2 Implementation of Innovation Sourcing Practices

Despite the prevailing idea that suppliers serve as the primary innovation partners for most companies, there are other members within the supply chain actively contributing to real instances of innovation sourcing.

In a study aiming to examine innovation sourcing strategies within leading companies in the Industrial Research Institute (IRI), Slowinski et al. (2009) identified firms incorporating customers into the innovation sourcing process. They achieved this by setting up websites to solicit ideas from customers. The outcomes were notably influenced by the industry types these firms operated in. Companies with a strong technical customer base of limited size found that employing this strategy resulted in repeatable and reliable actionable innovation, with the sales force playing a crucial role by actively encouraging idea submissions from customers. Examples include a medical devices firm engaging with physicians and academic experts, and a chemical firm seeking input from its technical customer base. On the other hand, firms with more diverse, non-technical customer bases (e.g., food and consumer products companies) found the value of websites to be outweighed by administrative burdens and were less successful.

This study employed a “Want, Find, Get, Manage” Model, proposing that a firm, after identifying what it “Wants” from sourcing practices, develops a strategy to “Find” it. Subsequently, the firm establishes an efficient process to contractually “Get” it and effectively “Manage” the relationship to success. The implementation of innovation sourcing practices primarily focuses on the “Want” and “Find” aspects.

The success of an innovation search is strongly dependent on how well a firm defines its “Wants”, ranging from the perennially sought-after common improvements (better, cheaper, faster) to entirely new functionalities or business objectives. Part of the definition process involves establishing acceptance criteria for each “Want” activity gap. These criteria act as filters that guide employees in identifying solutions, serving as another potential source of innovations within a company.

In fact, when seeking external resources, the initial step is consulting internal technical staff for recommendations on where to search. Their knowledge of the literature, patent landscapes, conference proceedings, and their personal external networks serve as excellent sources guiding the identification of promising “Find” targets. Involving both technical and marketing employees in this process enables the identification of wants along the value-added chain and the development of acceptance criteria aligning with both business and technical needs.

For example, GSK Consumer Health defines its wants at a category level, sharing them with a global network of technology scouts. Each scout is a full-time employee in a specific region that makes scouting a designated part of their responsibilities. To maximize the likelihood of finding interesting innovation practices, GSK Consumer Health publicly posts its wants. The P&G Bioscience group also shares its want list in the public domain.

While these are some common approaches that guide the “Find” activity, innovation sourcing is described as a “contact sport”. Firms need to actively seek, sense, and communicate with various external sources, including universities, technology brokers, federal laboratories, venture capital firms, international companies with patents or conference presentations in the firm’s areas of interest.

In the pursuit of implementing innovation sourcing strategies, Legenvre & Gualandris (2018) conducted a research study that integrated both qualitative and quantitative data gathered from diverse companies. This research enabled the formulation of a framework encompassing three crucial capabilities necessary for achieving excellence in the implementation of these practices in purchasing. Details of each capability are elucidated in Table 2.1.

Table 2.1: Three purchasing capabilities for success in innovation sourcing (Source: Legenvre & Gualandris, 2018)

| Capability | Purchasing Team Guidelines |
|---|---|
| 1. Explore unmet needs and anticipate future competitive advantages | • Understand and gather unmet needs, which can be expectations, constraints or problems without identified solution.<br>• Work closely with R&D, marketing, operations, and clients that experience those needs.<br>• Identifying and prioritizing such needs is important to provide competitive advantage. |
| 2. Explore external opportunities beyond first-tier suppliers | • Gain a wider understanding of the ecosystem to co-develop innovative solutions, instead of looking at supply markets as a source of competition that influences prices.<br>• Strengthen business intelligence and engage effectively with outsiders like new players or key suppliers. |
| 3. Involve suppliers in innovation projects | • Innovation projects need to look beyond risks and costs to offer competitive advantages, which can require extensive collaborations and more straightforward project work.<br>• Creating value requires managing a portfolio of innovation projects with outsiders. |

This framework is designed to assist C-level managers and purchasing teams in assessing their innovation sourcing progress. It asserts that purchasing teams hold a unique advantage in recognizing external innovation opportunities ahead of other members within the organisation.

However, to achieve concrete results, it is imperative to evolve and understand the nuances of engaging with both internal functions and external partners, taking the lead when necessary. Each of these capabilities should not be viewed in isolation, as they constitute integral components of a collective capacity for innovative sourcing.

These three capabilities are not mere alterations in the purchasing operating model. Rather, they imply a company-wide cultural transformation, offering both opportunities and challenges to the purchasing team, that needs to enhance its ability to explore and exploit the supply ecosystem to enhance its mission performance. This entails an enhancement of supply exploration capabilities, which, even in the most advanced organizations, remain the least developed.

In another paper on innovation sourcing strategies, Linder et al. (2003) conducted a study encompassing diverse companies to derive insights into these strategies. They identified five channels that characterize the innovation sources of these companies, contributing to the development of a comprehensive sourcing strategy. These channels are outlined in Table 2.2.

Table 2.2: External Innovation Channels (Source: Linder et al., 2003)

| Channel | Definition | Example |
|---|---|---|
| Buying Innovation on the Market | Companies acquire new technologies or ideas from external stakeholders, completely transferring the responsibility for innovation to entities such as universities or research companies. | Some retailers outsource the identification of IT's innovative uses for their business processes. |
| Resourcing | Companies supplement their internal research capabilities by contracting external suppliers for innovative tools on an as-needed basis, enabling them to tap into a global pool of expertise. This allows cost advantages or specific competencies that are not available internally. | Aventis enhances product development productivity by sourcing new technologies externally. |
| Cosourcing (Partnerships) | Companies collaborate and share resources to collectively address the costs and challenges associated with innovation (e.g. forming partnerships, joint ventures). Cosourcing allows companies to pool expertise and tackle industry-specific issues or regulatory requirements. | ABB collaborates with technology companies and university groups to seek innovation. |
| Community Sourcing | Companies engage with communities to contribute with ideas, feedback, and solutions, benefiting from the collective intelligence and creativity of diverse individuals. | eBay's sales category "automobiles" was identified and built by its customers. |
| Investing in Innovators | Companies access innovation by taking equity positions in external organisations, particularly those focused on small or emerging markets. This is done by investing in complementary businesses through venture funds, benefiting from new ideas without disrupting the established business model. | Nokia used to set up venture funds, investing in companies that complement its product and business development. |

## 2.3 Innovation Sourcing Challenges

As mentioned before, the introduction of new ideas, information, resources, and technological solutions emerging in the broad ecosystem has the potential to bring value to a company. However, these opportunities come with distinct challenges that companies must confront to realize the anticipated benefits for the business.

First of all, innovation sourcing opportunities can be difficult to identify and leverage effectively. These opportunities, along with potential threats, are often hidden in complex and opaque networks where companies have limited visibility and control. The potential value of these opportunities is often implicit, making it difficult to assess or benchmark. Moreover, they evolve over time and depend on the company's capacity to leverage and control complementary assets and to become the "best customer" of innovative partners (Henke & Zhang, 2010; Jacobides et al., 2006).

Furthermore, the integration of new knowledge and collaborative innovation with external partners is acknowledged to necessitate a certain degree of overlap in competences and knowledge bases (Hung & Chou, 2013). Indeed, achieving mutual understanding between organisations requires some distance between them. If knowledge bases are too similar, opportunities for learning are restricted. Conversely, if they are too distinct, the transfer of knowledge becomes challenging. High internal innovation levels can increase the appeal of a company as a partner, fostering more productive collaborations. However, for companies with low in-house innovation intensity, collaboration becomes especially crucial due to their limited internal resources (Barge-Gil, 2010; Dahlander & Gann, 2010).

In fact, the consensus suggests that organizations should strive for equilibrium between internal and external innovation. Kim et al. (2016) propose that an excessive reliance on external sources can be considered a notable weakness, as the dearth of internal resources for innovation can constrain an organization's capacity to delve into new knowledge domains. Additionally, external knowledge, being often accessible to others, poses a challenge for companies heavily dependent on it to sustain a competitive advantage over the long term.

Another intricate aspect of innovation sourcing pertains to the management of relationships and interconnections among partners, as well as their strategic objectives. Partners can simultaneously be collaborators at the R&D level, competitors at the business-unit level, and suppliers to each other within the supply chain. These multiple intersections give rise to complex strategies, wherein each firm uses its influence in one segment of the relationship to impact a completely unrelated segment (Slowinski et al., 2009).

An example of such complexity is the case where two partners work together towards a jointly developed innovation into the market. If one of the members intends to broadly sell it, this may entail selling to the other partner's competitors as well. While there are no rigidly defined guidelines for addressing this type of issues, some firms ask for a limited-time exclusivity period in the marketplace before allowing sales to competitors.

A commonly employed method to manage these relationships is to establish from the beginning an agreement that encompasses various strategic considerations from the perspective of each firm. This includes defining roles and responsibilities for each partner, determining how risks are allocated between the firms, specifying the distribution of costs and revenues, and elucidating how this distribution correlates with resource contributions (Walter et al., 2001).

However, challenges do not solely emerge at the relationship level. There are also internal adversities within companies, as employees may resist innovation sourcing for various reasons.

Employees perceive the administrative burden and the additional personal effort required to establish a collaborative relationship as an obstacle. The administrative load linked with accessing external resources can be substantial, resulting in time-consuming tasks that may not be immediately seen as beneficial, especially since their advantages are primarily realized in the long term.

The reality is that external collaboration inherently demands more time and effort to manage compared to internal projects. Managers are required to collaborate with the legal team for evaluating the partner's strategic intent and technical capabilities, and to engage with the business development group and other relevant functions to draft a joint development agreement, ensuring compatibility in decision-making between the firms. The process of establishing agreements such as Confidentiality Agreements or Material Transfer Agreements may lead to employee demotivation and to internal resistance. None of this is necessary when the innovation process is totally in-house. Given this reality, resistance to incorporating an external project into current responsibilities happens, especially if the advantages are not clearly perceived by the employees.

Besides, convincing employees that reallocating budget, resources and personnel to an external effort is advantageous can be challenging. If sourcing innovation is perceived by others as new, unusual, or in competition with internal activities, the level of effort required to overcome internal political resistance can be substantial (Henke & Zhang, 2010).

Moreover, establishing a well-defined approach to innovation sourcing is crucial for ensuring its success and effectively managing such relations.

Linder et al. (2003) identified that several companies deal with innovation sourcing in a transactional manner. This implies that managers make decisions without thoroughly analyzing how a specific external innovation transaction impacts other innovations (both internal and external) or its connection to transactions in other phases of the innovation chain. In large companies, this approach may lead to duplicated efforts, wasting resources, confusing partners and potentially embarrassing program managers, which ultimately yields uneven results.

Companies following this approach often fail to harness organizational learning. Crafting deals that align with broad company objectives while safeguarding intellectual assets requires specialized skills. However, many firms rely on individual program managers to oversee cross-organizational teams, cultivate effective relationships, and maintain the course of complex initiatives. In such organizations, there may be multiple external relationships, yet there is often no systematic method for applying the lessons learned from one relationship to others.

Even more detrimental than missed opportunities to apply learning, transactional innovation sourcing can also result in unintended loss of knowledge. An illustrative example is the case of Toyota Motor Corp., which, by outsourcing the design and manufacture of the electrical systems for its automobiles, surrendered its grasp of the detailed knowledge involved in this work and the profound understanding of the complex interactions within the systems.

In the previously discussed study by Slowinski et al. (2009), the findings indicated a perceived absence of a holistic vision of how sourcing innovation is connected to the development of corporate strategy in the companies being studied.

A clearly defined strategy plays a crucial role in determining the necessary assets to meet customer demands. Several strategic considerations aid managers in identifying which assets should be developed internally and which need to be sourced externally. These considerations include a precise comprehension of the firm's core capabilities and current resource needs, the imperative to protect and retain critical capabilities or intellectual assets in-house, and the firm's long-term strategic intent within its areas of business interest.

Finally, measuring the success of innovation sourcing presents another challenge, as it is inherently difficult to accomplish. Executives find it challenging to easily track the success of externally sourced innovation within their organizations.

Most organizations lack anything beyond anecdotal data regarding the performance of their innovation partnerships. The truth is that assessing how an innovation partnership influenced a company's outcomes is not a straightforward task. This challenge arises due to the inherent difficulty of directly comparing a scenario where the sourcing innovation practice occurred with another where it did not — only one of the two scenarios can take place.

Some pharmaceutical companies, for instance, use a technique where they compare the profitability of drugs in their portfolio based on whether they were developed internally or through partnerships. They integrate these results into models used for making future partnering decisions. Another approach used by certain high-tech firms involves comparing the time to market for in-house and partnered product development. However, it is important to note that these methodologies have inherent flaws, as different products may elicit varied market responses. Therefore, comparing them solely based on whether an external partnership was involved in the process is not a perfect measure (Linder et al., 2003).

Table 2.3: Innovation Sourcing Challenges found in Literature

| **Innovation Sourcing Challenges** | | |
|---|---|---|
| Opportunities can be difficult to identify and leverage | A certain degree of overlap in competences and knowledge bases is necessary | Organisations should strive for equilibrium between internal and external innovation |
| • Opportunities and potential threats are often hidden in complex networks where companies have limited visibility and control<br>• The potential value of these opportunities can be difficult to assess and evolve over time | • Achieving understanding between organisations requires some distance between them<br>• If knowledge bases are too similar, opportunities for learning are restricted, but if they are too distinct, the transfer of knowledge becomes challenging | • Excessive reliance on external sources can constrain the organisation's capacity to delve into new knowledge domains and to sustain a competitive advantage over the long term |
| External collaboration requires more time and effort to manage than internal projects | Innovation sourcing should not be managed without assessing its impact on the firm's operations and innovation processes | It is difficult to measure the success of innovation sourcing |
| • Convincing employees to reallocating budget, resources and personnel to an external effort can be challenging, especially considering the benefits are mainly in the long-term | • This may lead to duplicated efforts and wasting resources<br>• Beyond missed opportunities to apply learning, it is also possible to unintendedly lose crucial knowledge in outsourced areas | • It is not possible to know the outcomes compared to what would have happened without the partnership |

In summary, innovation sourcing brings advantages along with challenges that must be acknowledged and integrated into companies' strategies. While a firm may experience success in seeking innovation through partnerships without necessarily addressing all the discussed points, it is important to emphasise that one or two anecdotal successes in innovation sourcing do not necessarily translate into a systematic and sustainable capability.

The development of innovation sourcing skills happens over time through the application of learnings from each iteration. Crucially, management must consistently lead this process. Organizations learn at a gradual pace but have a tendency to forget quickly. It is of utmost importance to consistently remind workers engaged in such strategies that, although the outcomes of innovation sourcing are rarely certain, their success is gradually becoming a consensus. In the long term, the benefits of such practices will manifest (Slowinski et al., 2009).

## 2.4 Summary of Insights and Gaps in Literature

Innovation sourcing has garnered attention in literature throughout this century. As highlighted in the introduction, its significance has been steadily increasing, prompting extensive exploration of various facets. It has been investigated in diverse aspects, from defining its characteristics to analysing current practices and their outcomes. Furthermore, the literature has also delved into the associated risks of innovation sourcing, underscoring the importance for companies to avoid potential adverse effects.

The existing literature primarily comprises insights from internal company observations, which will also be the case of this study. However, no multiple case study approach within companies focusing on products was identified.

Pihlajamaa et al. (2017) presented an article with a similar approach to this study's intent, exploring whether supplier innovations can substitute internal R&D, particularly in the energy sector. However, their focus is notably narrower and is centred on services.

Similarly, Linder et al. (2003) conducted a study on the innovation sourcing practices of various companies, ranging from packaging to manufacturing, encompassing technology development and business processes, lacking specificity to any particular sector. Additionally, Slowinski et al. (2009) focused on industry research companies.

This highlights a notable gap in the literature, particularly concerning industry-specific studies on innovation sourcing practices, aside from the one in the energy segment. Consequently, this study can fill this void by addressing industry-specific nuances, offering a distinct perspective by focusing on companies with complex, developed supply chains of products.

# Chapter 3

# Methodology

## 3.1 Multiple Case Study Approach

This study employs a case study methodology to address the research question, aiming to elaborate propositions concerning innovation sourcing strategies and the reasoning behind their adoption. According to Yin's (2009) definition, a case study is an empirical analysis that investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident.

Following a multiple case study design, this research examines four Portuguese beverage companies. According to the same source, this approach is suitable for research questions framed around "how", being suitable for cases when the researcher lacks control over events, particularly those focusing on contemporary phenomena. Given that this study aligns with these criteria, the multiple case study method is deemed appropriate.

Moreover, Ketokivi & Choi (2014) contend that case research effectively balances methodological rigor and practical relevance, supporting the choice of this method.

The selection of case studies focuses on major industry players within the Portuguese beverage sector, chosen for their presumptive advanced implementation of innovation sourcing measures in their products and methods. These companies are perceived to possess a well-defined strategy for achieving a balanced approach between in-house and open innovation, making them ideal subjects for study.

The unit of analysis in this research is the companies themselves, with the study delving into their innovation sourcing patterns. Each case study concentrates on the unique approach of the respective company.

However, it is important to acknowledge the limitations of this approach. The study's reliance on a small sample size of four case studies may raise concerns about the generalization of the findings to the entire Portuguese beverage industry. The conclusions may also be influenced by the fact that all studied companies are large and based in the same country, which affects the confidence of the results when applied to other countries or smaller companies. Nonetheless, the diversity of core activities within the beverage companies, as shown in Table 3.1, indicates that the study's conclusions may be relevant to the entire beverage sector and not just specific types of beverages.

Additionally, the potential for bias in perception, stemming from insiders providing information about their own company's innovation strategies, as well as confidentiality issues, are noteworthy considerations.

## 3.2 Interviews Conduction

Prior to each interview, the study's objectives outlined in the introduction were communicated to the interviewee to ensure clarity on the interview's purpose and the broader research goals. Additionally, a definition of "Innovation Sourcing" was provided, derived from the conclusions of the literature review, defining it as "the acquisition and integration of critical knowledge for new products, services, and processes from external providers, rather than relying solely on internal development".

To structure the interviews, an interview guide was developed based on the findings of the literature review, following its structure and being divided into four parts: Interviewee Profile, Open Questions about Innovation, Innovation Sourcing Habits, and Innovation Sourcing Challenges. The guide transitioned from general inquiries to more specific topics as the interview progressed.

The Interviewee Profile section ensured alignment between the interviewee's professional background and the research objectives. Interviewees were selected from the Innovation/R&D Departments of their respective companies, responsible for decisions regarding innovation sourcing and familiar with its implications on beverage supply chains.

The section on Open Questions about Innovation aimed to grasp the interviewee's perception of their company's innovation strategy, facilitating an understanding of the role of innovation in the core operations of the business.

The third section was dedicated to meet the study's objectives, delving into specific details such as the presentation of Table 2.2 to clarify the innovation sourcing channels used by the companies and gather explicit examples thereof. Other inquiries included questions regarding suppliers being perceived as the most valuable partners in innovation sourcing, alongside with an exploration of the typical intricacies involved in establishing partnerships for innovative purposes, which are aspects drawn upon insights gathered from the literature.

The last section addressed obstacles and difficulties encountered in innovation sourcing, with subsequent questions tailored based on the interviewee's responses.

It is noteworthy that the interview questions were designed not to provide definitive answers to the research question but to offer possible explanations and descriptions of the innovation sourcing process. Thus, the interview guide served as a flexible framework rather than a rigid set of instructions. The interview guide can be found in Appendix A.

Table 3.1: Interview's Details

| Interviewee | Job Position | Company | Core Acticity | Date | Length |
|---|---|---|---|---|---|
| Inês Carola | Innovation Specialist | Sogrape | Wine | 24.04.2024 | 51 minutes |
| Cláudia Figueira | Head of Innovation | Grupo Nabeiro | Coffee | 24.04.2024 | 54 minutes |
| Andreia Vaz | Marketing & Innovation Director | Nespresso | Coffee | 26.04.2024 | 63 minutes |
| Diogo Vinagre<br>Teresa Sampaio | Innovation Project Manager<br>R&D Technical Project Manager | Central de Cervejas<br>e Bebidas | Beer, Cider,<br>Soda and Water | 29.04.2024 | 76 minutes |

All interviews were conducted online, utilizing a presentation to guide the discussion. Interviews were conducted in Portuguese, recorded, transcribed, and translated into English to enable analysis. The translated transcriptions can be found in Appendix B.

## 3.3 Data Analysis

The data analysis proceeded in two phases, following Eisenhardt's (1989) guidance.

Firstly, a within-case analysis was conducted based on the interview data and supplementary materials, such as company reports and publicly available information. This approach involved examining each case individually, beginning with an overview of the company to establish context, followed by a detailed examination of their innovation sourcing strategies. The objective was to become closely familiar with each individual case study and to identify case specific insights before generalising across the cases. This section aims to extract valuable insights into the practices employed by each company and contribute to the strategic enhancement of innovation sourcing strategies in the beverage industry.

The next step involved a cross-case analysis to compare findings across cases, highlighting similarities and differences in innovation sourcing strategies within the industry. This comparative approach aimed to address the research question by identifying commonalities and contrasts among companies. According to Voss (2010), this investigation of cross-case patterns is crucial for enhancing the generalization of conclusions drawn from intra-case analysis.

Through this data analysis methodology, generalizations and causal relationships between specific characteristics and their broader implications were identified in order to formulate propositions, providing new insights from an innovation sourcing perspective. This comparative analysis enabled a deeper understanding of industry practices.

In summary, the data analysis method involved identifying key findings from the case studies and cross-case analysis, ultimately providing actionable insights derived from the conclusions of the study.

Lastly, to ensure the quality of this research design, Yin (2009) highlights four tests: one for reliability and three for different types of validity. Reliability is demonstrated when the operations of a study can be repeated and yield the same results. Validity is divided into three types: internal validity, which establishes causal relationships as opposed to spurious ones; construct validity, which establishes correct operational measures for the concepts being studied; and external validity, which defines the domain in which the study's findings can be generalized.

Ensuring these parameters can be achieved through various methods, as employed in this study. Yin (2009) emphasizes the importance of using multiple sources of evidence to increase both construct validity and reliability. This is achieved by using documentation regarding the companies in addition to interviews, which both complement and verify the obtained insights. A wider variety of sources is thereby used to corroborate and enhance the reliability of evidence from other sources.

Having a case study database containing every study element — in this case, interview guide, interviews' transcriptions in Portuguese and translations to English, and all documents and reports used from the various companies — is also indicated by Yin (2009) as a manner of contributing to reliability, since it allows to maintain a "chain of evidence" and enables any external reader "to follow the derivation of any evidence from initial research questions to ultimate case study findings".

The pattern matching technique is also suggested as a method to increase internal validity (Yin, 2009). Additionally, each drafted case study has been sent to the interviewees for review and approval, ensuring the quality standards are met. The final conclusions drawn from the cross-case analysis were also shared with the interviewees for their feedback and approval.

# Chapter 4

# Within-Case Analysis

## 4.1 Case Study 1 – Sogrape

Sogrape is a global family-owned wine company with a strong international presence in over 120 markets. It leads the wine sector in Portugal, selling an average of more than 150 bottles per minute. Sogrape produces wine in the country's main wine-growing regions and internationally in Argentina, Chile, New Zealand, and Spain (Sogrape, 2024).

Among all the case studies, Sogrape stands out in terms of the increased relevance of innovation in recent years, as noted in the literature. This distinction is particularly evident, as highlighted by Inês Carola at the beginning of her interview: "In recent years, the role of innovation has been increasingly prominent at Sogrape."

One significant aspect was the separation of Innovation and Research & Development into two distinct departments six years ago, making Sogrape unique among the studied companies in this aspect. The Innovation department focuses on finding solutions to everyday business challenges, such as recycling and data digitization. In contrast, the R&D department addresses specific questions in the wine sector, like experimenting with new flavours and brands and studying new viticultural techniques.

According to the interviewee, stakeholder involvement in the innovation process has also shifted in the last two years. Initially, the R&D department was intended to work more externally through its extensive network of contacts, while the Innovation department focused on in-house innovation. However, the realization of the benefits of involving external stakeholders led to team and structural changes, integrating open sourcing with external partners into both departments, rather than limiting it to just the R&D department.

Another unique characteristic of Sogrape among the case studies is its clear distinction between open innovation and in-house innovation in its annual report. Notably, it is the only company that dedicates a specific chapter to "Innovation", rather than mentioning the term sporadically throughout the report. This highlights the importance Sogrape places on this theme.

The operating model for internal innovation is meticulously designed, employing the W.I.N.E. model, which is divided into four phases: Wake-up, where a problem is transformed into a challenge; Imagine, where ideas evolve into concepts; Nurture, where concepts materialise into solutions; and Expand, where a scale-up plan is implemented.

In November 2023, Sogrape established Sogrape Ventures. This initiative exemplifies the "Investing in Innovators" channel described in Table 2.2. Sogrape Ventures is a capital risk fund created to "strengthen Sogrape's commitment to innovation." It launched with a budget of 5 million euros and aims to "invest in and accelerate the disruptive startups ecosystem, offering innovative solutions – technologies, processes, and business models – for the wine industry value chain and the beverage industry in general".

Areas of interest for these startups are diverse, including technologies such as Artificial Intelligence and Machine Learning, innovations in sustainable packaging and eco-friendly materials, and the development of new beverages, such as non-alcoholic options. The interview indicated that the fund has attracted a significant number of startup applications, marking it as a success. While the first investment has not yet been made, it is expected to happen soon (Sogrape, 2023).

Sogrape Ventures is to be integrated into the Innovation department to be aligned with both in-house and open innovation. The fund will focus on three pillars: Corporate Venture Building, External Ventures Portfolio, and Startup Incubator. Each of these pillars, along with a scheme of their interconnection within the Innovation department, is illustrated in Figure 4.1.

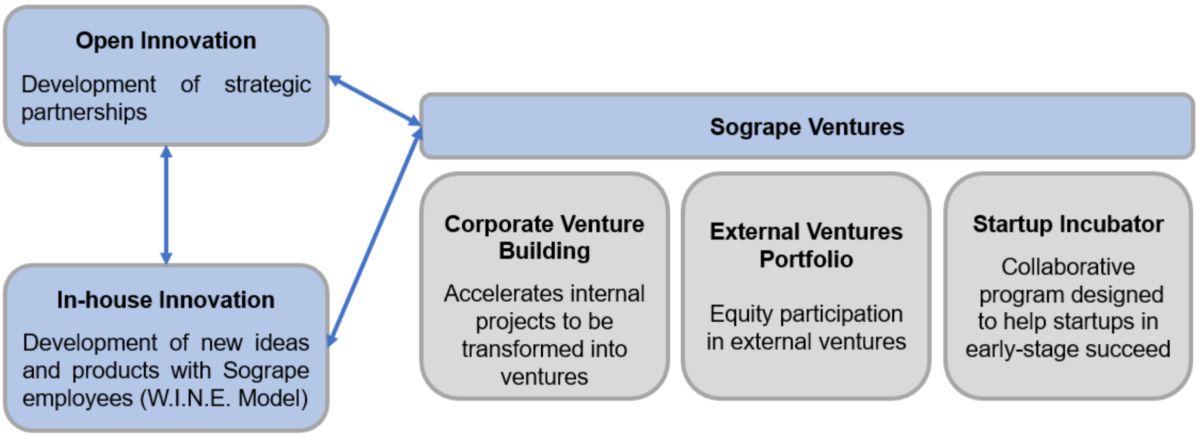


Figure 4.1: Sogrape's Innovation Structure (Source: Sogrape, 2023)

Regarding the R&D department, it operates as a hub of innovation, grounded in two core principles: knowledge management and experimentation.

Knowledge is cultivated through both external sources, like seminars, publications, and partnerships, and internal experimentation, such as studies, trials, tests, and prototypes. This knowledge is meticulously catalogued in a Knowledge Resource Centre accessible to the entire company. With over 26 000 scientific documents related to wine, this knowledge base keeps Sogrape aware of global wine advancements, supporting cost-effective development.

Experimentation involves defining, managing, and executing research projects that create privileged knowledge, providing a competitive advantage and addressing identified knowledge gaps (Sogrape, 2023).

Sogrape currently has over 30 R&D projects running in collaboration with 130 entities. A scheme of the Sogrape's R&D Process is presented in Figure 4.2.

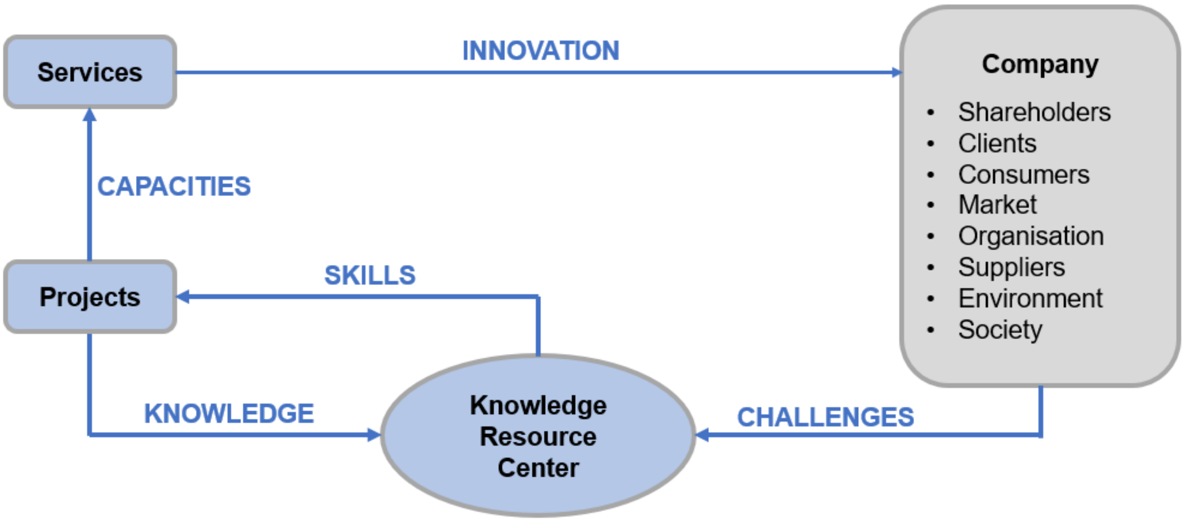


Figure 4.2: Sogrape's R&D Process (Source: Sogrape, 2023)

Sogrape's approach to innovation is structured around a governance framework with the Innovation Committee managing innovation. This committee aims to foster a dynamic exchange of ideas and provide strategic guidance, defining priorities for innovation challenges and opportunities. Additionally, there are Captains responsible for guiding project teams, Sponsors providing support to them, Project Managers overseeing the projects, and the Innovation Team, responsible for coordinating all innovation processes and their participants. Together, these elements form Sogrape's Innovation Ecosystem Structure. This framework also facilitates active monitoring of emerging trends, ensuring the company stays ahead and develops high-quality, innovative products that resonate with consumer preferences (Sogrape, 2023).

In conclusion, Sogrape is an excellent case study of how innovation has been given a more important role in recent years. The company's processes and role distribution are well-defined and strategically planned, with significant structural changes implemented over the past few years. These efforts have been instrumental in enhancing quality, promoting sustainability, and positioning Sogrape as an industry leader. They have led to notable achievements, including the registration of two international patents, the development of scientific research projects for vegan wine, and the publication of research papers, improving operational efficiency and enabling swift adaptation to market trends.

## 4.2 Case Study 2 – Grupo Nabeiro

Grupo Nabeiro is a group that comprises a total of 28 companies across the sectors of food and beverages, real estate, industry and services, distribution, and tourism and restaurants.

However, its primary activity remains where it all began — Delta Cafés, the group's largest brand and the leader in the Portuguese coffee market for over two decades, now present in more than forty countries. Founded in 1961 in a 50-square-meter warehouse in Alentejo, in Portugal's interior, near the border with Spain, Delta Cafés has since expanded internationally and diversified its business. Today, the group not only focuses on coffee sales but also offers a range of other beverages, including wine, water, and liqueurs, as well as food products. The company that currently encompasses the Delta Cafés brand is NOVADELTA, founded in 1985, serving as the group's industrial unit dedicated to coffee roasting, packaging, and distribution.

The expansion from selling coffee to a diverse range of products and services in different sectors occurred gradually over the years. Focusing on the food and beverage industry, this diversification arose from two main aspects. First, there was a desire to broaden the business around the coffee base, leveraging their existing knowledge to create products like coffee-flavoured cereal bars, coffee-based cold drinks, and coffee machines with coffee capsules, among others. The second aspect is the concept of a circular economy, which involves creating products using waste from Delta's coffee production, such as mushrooms and fertilisers (Grupo Nabeiro, n.d.).

This portfolio expansion is closely connected to innovation, which is a pillar for the company's future and a contributor to growth, being embedded in the business (Distribuição Hoje, 2024). Its role involves introducing products with international potential, thus driving the company's internationalisation, business sustainability, and diversification.

Diversification is divided into two main areas: Innovation Intelligence, where the group has a technological radar to capture innovation opportunities, and Product Development, which includes new products and equipment. According to the Head of Innovation, the use of external stakeholders in their innovation process is applied when it concerns areas outside their core coffee activity. They realised over time that fostering innovation solely internally would not yield the best results, leading to the externalisation of certain areas.

In 2010, Grupo Nabeiro created an innovation center named Diverge. This center internally designed the company's innovation model, MIND, as a result of strategic thinking for innovation, aimed at anticipating the future, creating value and new knowledge, and stimulating innovation.

This decentralized model ensures the strategic alignment of the entire MIND community with the involvement of the entire organization. All Grupo Nabeiro employees are invited to participate in various initiatives of the Innovation Program, promoting a participatory culture and encouraging contributions from all employees in the innovation process. Every year, the entrepreneurial spirit of employees is put to the test in the Delta MIND Lab, a corporate program for validating innovative ideas.

In a holistic approach to the entire innovation ecosystem, Diverge is also responsible for managing the Open Innovation Program, Disruption, which aims at accelerating entrepreneurs' businesses. This program represents innovation from the outside in, bringing in projects with synergies to their business and adding value to the company (Grupo Nabeiro, n.d.).

This open innovation program was created by Delta Ventures, a unit within the business whose role is to foster the growth of startups after acquiring shares. Rui Miguel Nabeiro, CEO of the group, states, "These startups have incredible growth potential, thriving within our ecosystem. We believe that what we provide is a catalyst for their growth, and a benefit for us is also having the results associated with our group since we are shareholders of these companies."

Delta Ventures acts as a startup accelerator and incubator, catalysing groundbreaking solutions in product, sustainability, relationships, and digital transformation. The business unit offers startups a unique opportunity to integrate their innovative products and services into Grupo Nabeiro through collaborative pilot programs (Lopes, 2022).

This is another example of the "Investing in Innovators" channel identified by Linder et al. (2003), where a venture capital department within the company acquires shares in startups to accelerate innovation. This approach aids business development by leveraging existing technologies available in the market and emphasising disruptive innovation for new products.

Concluding, even though the innovation structure in the company is not clearly stated in an official report, the available information suggests that it is well-organized and has evolved over recent years. Diverge is a center of innovation responsible for managing both open innovation and in-house innovation. For open innovation, they focus on activities outside their core coffee business, with a program called Disruption that brings in external projects with synergies to their business. This department was created by Delta Ventures, a venture capital arm responsible for investing in startups with technology and knowledge to enhance Grupo Nabeiro's activities and products. For in-house innovation, the company uses the MIND innovation model and encourages all employees to participate in the innovation process with their ideas, particularly those related to their expertise in the coffee sector. A scheme illustrating this framework organization is presented in Figure 4.3.

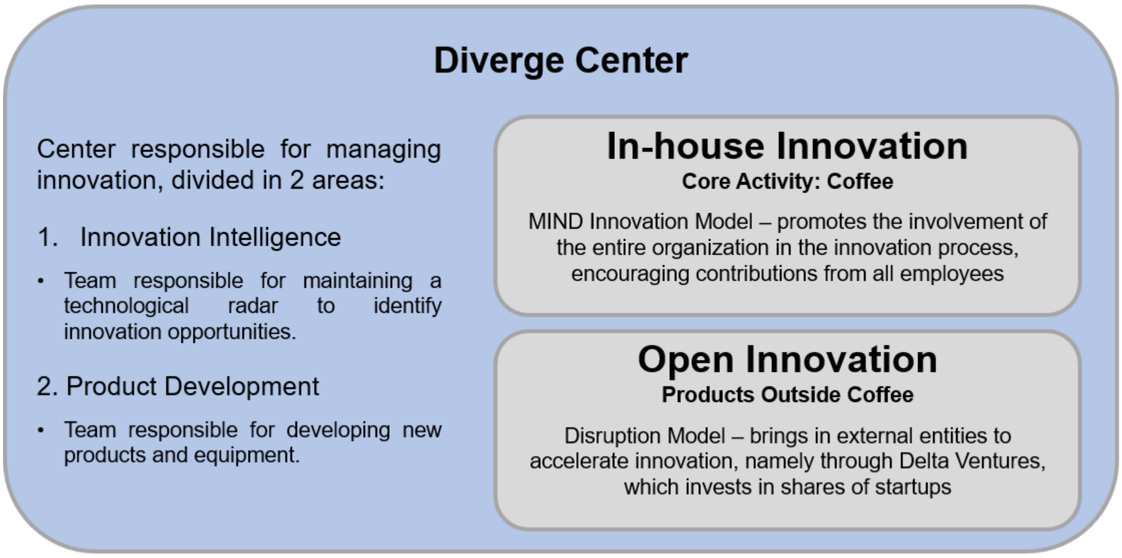


Figure 4.3: Grupo Nabeiro's Innovation Structure

This demonstrates the importance of innovation for Grupo Nabeiro and its constant presence within the company. The CEO clearly states that only with innovation can they build the future and achieve their goal of becoming one of the top 10 coffee brands worldwide within 10 to 15 years (currently ranked 22nd). To do so, they intend to continue innovating and investing in new product categories to reinforce their business strategy (Mar, 2024).

## 4.3 Case Study 3 – Nespresso

Nespresso is part of the Nestlé Group, a Swiss multinational food and drink corporation. This case study focuses on the Portuguese branch of Nespresso.

Nespresso's story began with a simple but revolutionary idea: to enable anyone to create the perfect cup of coffee, as if they were a "skilled barista" (Nespresso, n.d.). In 1970, Nestlé R&D department received the mission of developing a system to make espresso coffee that matched the quality of the best Italian coffees. This led to the creation of a revolutionary machine that used hermetically sealed coffee capsules. Six years later, they patented the process.

However, it was only in 1986 that, in partnership with the manufacturer Turmix, the Nespresso brand was created in the city of Vevey, Switzerland. At that time, only four coffee varieties and one machine model were available, and the products were offered exclusively to offices in Switzerland, Italy, and Japan (Mundo das Marcas, 2020). From that year onward, there have been five phases of growth and innovation leading up to today, as illustrated in Figure 4.4.

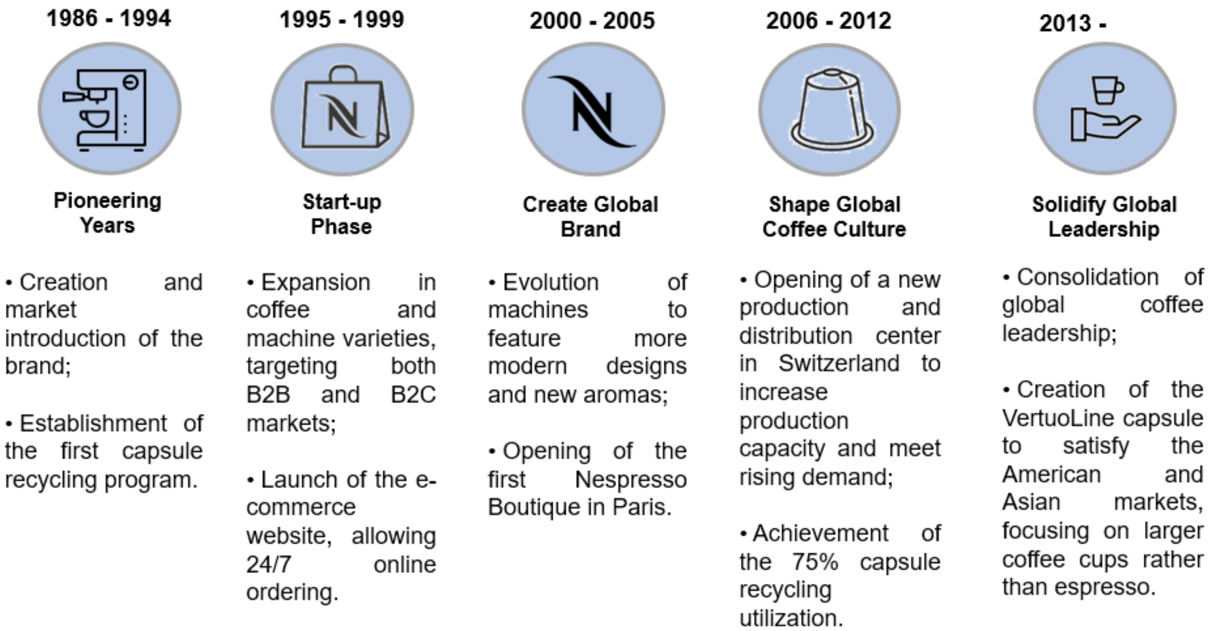


Figure 4.4: Nespresso's Five Phases of Growth and Innovation (Source: Nestlé Nespresso SA, Coporate Communication, 2016)

Nespresso has redefined and revolutionised the way millions of people enjoy their coffee, shaping global coffee culture through a focus on delivering the ultimate coffee experience. This has been achieved by offering a variety of aromas in its capsules and modern designs for its machines. The company's history is marked by a passion for perfection and a commitment to continuous innovation and sustainability, which are at the core of their business activities (Nestlé Nespresso SA, Corporate Communication, 2016).

Nespresso's coffee is not available through resellers. It can only be ordered online or at exclusive Boutiques, though machines are sold through retailers. In Portugal, there are about 1 500 delivery and collection points, and 23 Nespresso Boutiques.

The Nestlé Group boasts one of the largest research centres in the world and is the leading investor in R&D for food and beverages globally. However, this does not imply that all their innovation is internal. For example, in 2019, Nestlé launched an R&D Accelerator program to incorporate external perspectives and seek solutions for more complex problems. Over six months, this program identifies opportunities, develops solutions, and conducts pilots at a fast pace, involving employees, universities, and startups in projects that can be related to food and drinks or design. According to the Portuguese Director of Marketing & Innovation, this demonstrates the group's increasing focus on external collaboration.

As part of a large international network, Nespresso presents some unique aspects among the case studies. The Director of Marketing & Innovation clarified that, locally, there is little innovation in terms of creating from scratch, as the international team in Switzerland handles such tasks. Therefore, her role focuses on commercialization innovation, identifying local opportunities and launching new products. This includes promoting new products, suggesting new ideas, and engaging with consumers, particularly through the Consumer Co-Lab, a group that tests and provides feedback on different aspects of new products, like packaging or flavours.

Therefore, in Portugal, Nespresso does not engage in product root innovations. An example of the complementarity between the Portuguese branch and the Swiss headquarters is the Nespresso Lisbon BICA, a coffee capsule similar to traditional Lisbon coffee (stronger and bitter flavour), originated from a local need identified in Portugal. Nestlé's food science engineers in Switzerland developed the capsule recipe, while the Portuguese branch focused on service innovation, including the commercial plan, quantities, pricing, and communication strategy.

Another distinctive aspect of Nespresso is that, as an international major company, it ensures continuous innovation scanning through a specially clearly defined method. Its Global Business Strategy (GBS) defines what needs to be done for the business to succeed and grow over the next 5-10 years worldwide. The Regional Business Strategy (RBS) adapts the GBS to regional market conditions such as their type of consumers. Lastly, the Market Business Strategy (MBS), updated every three years, uses the RBS to try to anticipate future trends to address tensions between the company and consumers, ensuring continuous access to new ideas and solutions, serving as a diagnostic moment.

In conclusion, innovation and sustainability are core values for Nespresso. Their coordinated, complex strategy allows for continuous improvement and global competitiveness. There is a complementary strategy between each country's activities, which focus more on commercialization innovation, and the Swiss headquarters, where research activities are based. External innovation plays a role at both levels, such as the involvement of consumers to identify local needs and the involvement of startups for research innovation in Switzerland.

## 4.4 Case Study 4 – Central de Cervejas e Bebidas

Central de Cervejas e Bebidas is a group dedicated to the production, bottling, marketing, and distribution of beers, ciders, waters, and sodas. Its history dates back to the 17th century, when beer was first sold in Portugal. Since then, the group has gone through various Mergers and Acquisitions (M&As) of different beverage producers, leading to its current composition of 10 beer brands, 4 water brands, 2 soda brands, and 1 cider brand.

In 2008, the company was acquired by the HEINEKEN Group, the leading brewing group in Europe, which now holds 100% control of the company (Sociedade Central de Cervejas e Bebidas, n.d.).

Innovation is then a crucial factor for the group. Its strategy of innovation sourcing actually is the one with the most externalised evidence of all the case studies. Whenever the company wanted to expand into a new range of drinks, they sought out existing expertise to join strengths. This approach is evident in the many M&As throughout the company's history, as well as in various collaborations. One notable example is the development of a drink, Ice Coffee, in partnership with Delta Cafés, from Grupo Nabeiro.

In an interview, the former General Marketing Director of the group emphasised that innovation has always been a pillar of growth at Central de Cervejas e Bebidas, considering the group to be one of the leaders in market innovation. As an example, he mentioned the creation of a 5-liter beer keg and the necessary technologies to make it possible, with the company being the first worldwide to achieve this.

In the same interview, he outlined that innovation at the company follows four phases: first, creating various potential ideas, some of which become actual ideas while others are just attempts. For the company, an innovation addresses a specific consumption occasion and a well-identified motivation, ensuring that the consumer adopts the product into their regular brand repertoire. The second phase involves determining the idea's feasibility. If feasible, the third phase is developing the idea efficiently, and the final phase is its market introduction.

However, he also mentioned that one cannot rely solely on major innovations. It is essential to continuously refresh consumers' perceptions and keep existing brands alive in their minds. Additionally, innovation does not only involve presenting and launching new products; it can also occur in the production process by increasing efficiency, or in the marketing of products (Jorge, 2009).

Being a company with a diverse range of brands in different beverages, innovation is tailored to each brand, as stated by R&D Technical Project Manager Teresa Sampaio in the interview. For their more recent cider brand, they aim to introduce a new flavour each year to keep the brand fresh. In the case of Luso water, innovation is closely linked to sustainability. For Sagres, one of their beer brands, innovation is more tied to Portuguese identity and football. For example, during last year's Women's World Cup, images of the Portuguese national team players were featured on the beer caps, showcasing a marketing innovation.

This illustrates that innovation can take various forms. Sometimes it involves complex efforts, such as creating a new flavour, while other times it may be simpler, like changing the brand image, as with Sagres and football. The approach depends on the brand's objectives, whether it's to gain visibility, grow the brand, target a new consumer profile, or other goals.

Regarding the involvement of external stakeholders in the innovation process, it can take various forms and is highly valued. Regular market research studies are conducted to understand consumer preferences, allowing innovation to flow from outside to inside. Suppliers also play a crucial role, particularly in sustainability innovation. For instance, the company relies on their glass suppliers for ideas on creating more sustainable bottles.

Despite being part of the international HEINEKEN group, the majority of the innovation still originates from Portugal. Diogo Vinagre, Innovation Project Manager, mentioned in the interview that some of their innovation stems from assumptions or ideas developed internally and then brought to the market. This approach means the innovation is not always directly driven by consumer demand but by introducing new products or packaging that consumers have never seen before. This process is typically supported by internal research and the company's available knowledge.

Summing it up, even though the innovation process at Central de Cervejas e Bebidas seems to rely heavily on partnerships and M&As, as there are no official reports detailing their strategy, active open innovation strategies have been identified in the interview. However, the term "open innovation" is never explicitly mentioned in any interview or on their website.

Furthermore, they were the only interviewees who stated that they do not necessarily strike a balance between in-house and external innovation, noting that it tends to occur naturally. This showcases a simpler and more direct innovation strategy, which, although not formally defined, has yielded significant results. Their brands are among the largest in Portugal in their respective markets, and they have achieved notable innovation projects with good outcomes. Thus, when a project only requires internal knowledge, such as developing a new recipe, they do not seek external input. However, when exploring new packaging, they often consult suppliers. Most projects involve both aspects: in the ideation phase, there is often external input from both customers and suppliers, while during implementation, it depends on whether the necessary expertise is available internally.

# Chapter 5

# Cross-Case Analysis

## 5.1 Preliminary Cross-Case Comparisons

Beginning with a more direct comparison across cases, the diversity among these companies unveils significant differences, highlighting distinct unique characteristics of each while also identifying commonalities.

A first look into the cases might lead to the creation of two groups: Sogrape and Grupo Nabeiro, Portuguese companies with international sales, and Nespresso and Central de Cervejas e Bebidas, owned by major international groups in the food and beverage industry.

Sogrape and Grupo Nabeiro stand out for their well-established structures for generating and managing ideas and for cultivating an environment conducive to fostering innovation. They have developed operating models that delineate how innovation is approached and how the mindset is nurtured, encouraging company-wide participation in idea generation. Sogrape employs the W.I.N.E. model, while Grupo Nabeiro employs the MIND and Disruption Models for in-house and open innovation, respectively.

Nevertheless, Sogrape shows greater transparency by publishing documents on its innovation practices, whereas Grupo Nabeiro does not. Both companies are, however, key innovators in the Portuguese market. Their innovation efforts are managed entirely within Portugal and feature well-defined, recently evolved structures that have achieved significant results. Additionally, their commitment to innovation is evident in their recent ventures to invest in startups, further accelerating the innovation process.

In comparison, the second group, comprising Nespresso and Central de Cervejas e Bebidas, demonstrates notable differences due to their reliance on their international parent companies for certain aspects of innovation. They benefit from the substantial budgets and resources of these larger groups, such as advantages from M&As conducted at the international level, without direct involvement from the Portuguese branches. Additionally, they have access to extensive research capabilities, broader human resources and an expansive network.

However, even within this group, Nespresso stands out. As part of Nestlé, a major group with one of the highest R&D expenditures in the food and beverage industry, innovation for new product formulas originates from Nestlé's Swiss headquarters. This leaves the Portuguese branch solely responsible for having these ideas and commercialising them. Thus, Nespresso relies heavily on its Swiss headquarters to the development phases of innovation, rarely involving external entities in this stage. In contrast, all the other case studies, including Central de Cervejas e Bebidas, despite being owned by the HEINEKEN group, develop their new products locally in Portugal.

Furthermore, Nespresso's sales model is oriented towards direct sales to customers through their Boutiques or online. The other companies operate through two sales channels: distribution (selling products in retailers) and HoReCa (Hotels, Restaurants, and Cafés). This means they are less directly in touch with the end consumer compared to Nespresso. Consequently, their innovation processes are influenced by this B2B focus, as they must first engage with their intermediary clients before reaching the end consumer, whereas Nespresso directly engages with its customers in a B2C manner.

Another unique aspect among the case studies is that, while all companies offer a range of products and SKUs, they each focus on a single core product, except Central de Cervejas e Bebidas. This company lacks a core focus, producing beers, ciders, sodas, and waters without any one being particularly prominent. Unlike Grupo Nabeiro, where brands outside coffee are extensions, Central de Cervejas e Bebidas maintains a broader portfolio with each product line contributing equally to the company's importance.

Having a range of four distinctly different case studies within the Portuguese beverage industry offers significant advantages. The diversity among these companies enhances confidence in extrapolating conclusions to the entire industry compared to a more homogeneous group. With varied innovation structures, internal research capacities, and innovation budgets, the analysis becomes more precise and comprehensive. This ensures that the conclusions drawn are robust and applicable across different contexts within the industry, catering to companies of various sizes and innovation structures. These differences will be considered in the data analysis to identify any implied consequences of the previously mentioned characteristics, and groupings made according to similar characteristics will be analysed to build logical causal relationships, where similarities lead to consequences as explained by reasoning.

## 5.2 External Stakeholders Influence in Innovation Types and Phases

When asked about the role of different stakeholders — suppliers, clients, research companies, and competitors — in the innovation process, all interviewees agreed that all these stakeholders had relevance. The question aimed to identify if there was a pattern in their responses, particularly if they ranked the same stakeholders as the most relevant. Although stakeholders were ranked from most to least relevant, the consistent observation was that each stakeholder's role was said to vary according to the innovation phase of the project being developed.

The analysis revealed that an innovation project typically involves four phases:

1. **Ideation**: In this front-end phase, ideas are gathered from across the company. Interviewees noted that new product ideas often come from individuals outside the innovation departments. Customers play a crucial role in this phase, providing input on what new products they would like to see through surveys or more in-depth market studies. After all, they are the target of the innovation and need to be satisfied, as some ideas might not align with their interests. Competitors are also considered at this stage by observing their activities to avoid falling behind, although they were said to be the least used stakeholder and not directly involved in the process.

2. **Viability Analysis**: In this phase, ideas are filtered to determine their feasibility. Obstacles may arise due to market applicability, technological limitations, financial constraints, etc. Research institutions, including universities, are used to complement the companies' expertise by providing the specialised knowledge needed for more specific areas where the companies may lack expertise.

3. **Development**: If an idea is deemed viable in the previous stage, it progresses to the development phase, where viable ideas are developed into tangible projects. Research institutions partner with companies to achieve results, providing specialised knowledge that complements the companies' capabilities. Customers again play a critical role in this phase. Once a prototype is developed, it is common to seek customer feedback on their opinions, suggested changes, and preferences among different options. This feedback helps shape the final product features.

4. **Market Introduction**: This phase involves marketing the product after determining the best implementation strategies. Suppliers are heavily involved at this stage, assessing the feasibility of implementing ideas as intended, providing the necessary technology, and accommodating required changes.

This phase division aligns with the structure described by the former General Marketing Director of Central de Cervejas e Bebidas in an interview (Jorge, 2009). Figure 5.1 presents a diagram illustrating the stakeholders' roles throughout the innovation lifecycle.

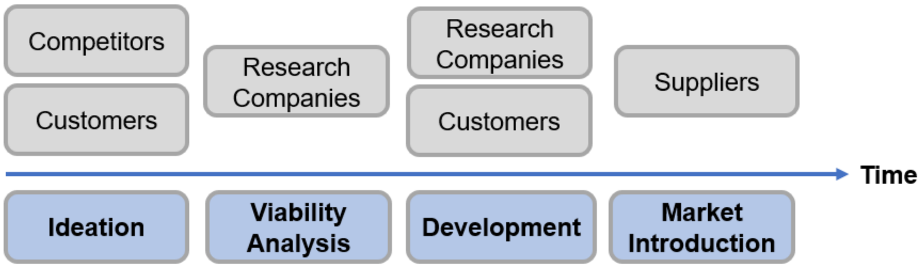


Figure 5.1: Key Stakeholders in each Innovation Phase

All interview responses aligned with this idea, though only Nespresso and Central de Cervejas e Bebidas directly acknowledged it. When presented with the conclusions, the other two companies also agreed with the findings. Thus, the conclusions carry a high level of confidence.

Although the division of innovation phases became evident through the responses, which ranked stakeholders as most or least important depending on the phase, no clear pattern emerged indicating that certain stakeholders were more relevant in specific phases for certain groups with particular characteristics. However, another intriguing insight arose from analysing stakeholders' relevance throughout the innovation lifecycle. Beyond being phase-dependent, the role of stakeholders also varies based on the type of innovation being developed. The case study analysis revealed three types of innovation projects:

1. **Disruptive Innovation** involves creating from scratch entirely new products or methods that address previously unmet customer needs. For example, Grupo Nabeiro created RISE, a coffee machine that extracts coffee upside down, intensifying its natural aroma and producing a richer, more persistent cream.

2. **Incremental Innovation** focuses on improving existing processes or products to increase efficiency and improve performance. This type of innovation is more about making gradual enhancements using improved methodologies. An example of this is optimising production lines to increase the number of drinks produced per hour.

3. **Commercialization Innovation** involves developing creative, out-of-the-box strategies for bringing new products to market. This can include innovative approaches to pricing, product placement, marketing campaigns, or distribution channels. Examples include using subscription models to sell new products, offering personalised packaging options, or launching an exclusive online platform dedicated to a specific product.

All these types of innovation follow the four phases previously discussed. However, no single stakeholder was found to be consistently more important for each type of innovation. The role of stakeholders varies significantly depending on the specific project, regardless of the innovation type. Some disruptive innovation projects may rely heavily on suppliers, while others may not involve them at all. Similarly, incremental innovation projects may or may not engage research companies, depending on their specific objectives. Consequently, there is no general pattern in stakeholder involvement across different types of innovation.

That said, the distinction between these innovation types highlights a significant insight from Nespresso's case. The company's direct-to-consumer B2C business model, which involves selling coffee capsules and machines directly to customers without relying on retailers, fosters a closer connection with its clients. This direct engagement leads Nespresso to excel in specialised commercialization innovation.

While all the case studies confirmed some level of customer involvement in innovation, Nespresso's approach is unique due to its systematic and regulated protocols for continuous customer engagement. This ongoing interaction allows Nespresso to better understand its customers and directly collect data to identify the most effective marketing strategies, resulting in more refined and effective commercialization innovation.

In contrast, companies that operate primarily through B2B models face challenges in maintaining closer contact with their clients, which hampers the development of advanced commercialization innovation. These companies tend to rely more on market studies and occasional customer feedback rather than continuous interaction.

Regarding disruptive and incremental innovation, no specific relationship with any stakeholder proximity was observed. The level or characteristics of these types of innovation did not appear to be influenced by any particular company characteristics. Although Nespresso relies more heavily on internal R&D for the development phase of these innovations compared to the other case studies, this reliance is due to its affiliation with the large international Nestlé group rather than its B2C model.

This consideration leads to the formulation of the first proposition of this study:

**Proposition 1:** Companies with direct-to-consumer (B2C) business models engage in more specialised commercialization innovation due to their closer and more continuous connection with customers. This direct interaction facilitates the collection of actionable insights through data collection. Companies relying on retailers (B2B) often lack this direct connection, leading to a greater reliance on market studies for customer insights and a reduced focus on commercialization innovation.

## 5.3 External Innovation Channels and Practices

Regarding the innovation channels identified by Linder et al. (2003) and shown in Table 2.2, it was noted that these channels were generally considered very accurate and representative of the current reality of the companies under study, despite originating from a 21-year-old paper. A table detailing the channels used by each case study is presented in Table 5.1.

Table 5.1: External Innovation Channels used in each Case Study (Source: Linder et al., 2003)

| Channel | Sogrape | Grupo Nabeiro | Nespresso | Central de Cervejas e Bebidas |
|---|---|---|---|---|
| Buying Innovation on the Market | ✗ | ✗ | ⊖ | ⊖ |
| Resourcing | ✗ | ✓ | ✓ | ✓ |
| Cosourcing (Partnerships) | ✓ | ✓ | ✓ | ✓ |
| Community Sourcing | ✓ | ✓ | ✓ | ✓ |
| Investing in Innovators | ✓ | ✓ | ⊖ | ⊖ |

✓ Used ⊖ Internationally used by brand owner ✗ Not Used

Firstly, cosourcing and community sourcing were acknowledged as the most utilized channels in all case studies. Partnerships are established when knowledge is combined to achieve final results. Engaging with the community is observed when surveys and market studies are conducted to generate ideas, and when products are being developed to meet consumer needs and preferences.

Beyond these two more evident and direct channels, resourcing is also mentioned in all cases — unlike cosourcing, resourcing involves partnerships on an as-needed basis, leading to less enduring relationships — except for Sogrape, which prefers longer relationships to build trust and achieve better results. Its importance was however considered to be inferior to the previously mentioned two channels. An example of this channel's usage was provided by Central de Cervejas e Bebidas. When implementing a new product, such as it happened with small-scale craft beers or 10-liter water bottles, they initially outsourced production to a partner with the necessary know-how, technology, and business model to avoid disrupting current operations. Later, they adapted their production capacity to be able to handle these products

When it comes to buying innovation on the market, there is a clear differentiation between the two Portuguese companies responsible for their entire innovation process and the two owned by major international groups. The first group does not buy innovation on the market, recognizing the benefits of establishing partnerships over acquiring entire companies. The second group agrees on the advantages of partnerships but includes a detail: the international groups of Nestlé and HEINEKEN frequently use this channel through M&As.

This channel is used by large global groups but less frequent in smaller companies in this market, who tend to avoid this channel due to its complexity and length, favoring cosourcing instead.

Lastly, the investing in innovators channel reveals interesting insights from the interviews. Again, a difference between the two groups is observed. Grupo Nabeiro and Sogrape have recently established ventures to invest in startups, fostering innovation in a collaborative environment. This quite specific channel is now present in these companies, with Delta Ventures established in 2018 and Sogrape Ventures in 2023. The other two companies have similar channels within their international groups, represented by startup buyers and incubator programs, but these are not managed by the Portuguese branches.

Hence, this channel has evolved in recent years in the Portuguese beverage market, with both the two independent Portuguese companies outside major international groups recently recognizing its importance and building departments for investing in innovators.

Another noteworthy insight is the general observation from all interviews that environmental sustainability is a top theme closely connected to innovation sourcing. All four case studies rely on cosourcing with their suppliers to achieve more sustainable packaging and bottling, and production processes that pollute less. This consensus indicates that important cosourcing projects often relate to achieving more environmentally friendly products. Suppliers prioritize these aspects because customers increasingly value sustainability.

The propositions coming from this analysis are:

**Proposition 2:** Larger firms in the beverage industry, particularly those within major international groups, sometimes acquire innovation through Mergers and Acquisitions (M&As) when targeting specific characteristics, leveraging their extensive structures and resources. Medium and smaller-scale firms outside these large groups do not fully outsource innovation. Instead, they prioritize long-term partnerships, making use of their existing resources in collaboration with external partners for a more cost-effective approach.

**Proposition 3:** Establishing venture departments to invest in startups used to be accessible only to large multinational groups with the financial and human resources to select and invest in startup incubators. However, the success of these ventures has motivated businesses outside of these major groups to adopt this channel, and it has already proven successful for them.

## 5.4 Discussion

Lastly, the insights gathered from the case studies will be compared with the literature to identify areas of alignment and divergence, and to explore the reasons behind any differences.

An initial analysis reveals that Sogrape and Grupo Nabeiro stand out as cases where collaborative development with external entities has become a more prevalent source of innovation in recent years, as described by Kostopoulos et al. (2011) and Rosell & Lakemond (2012). Their evolving innovation frameworks, highlighted in their case studies, along with the increasing use and acknowledged importance of external stakeholders in the innovation process, prove this.

It is noteworthy that, although the stakeholders' role was said to vary during the innovation lifecycle, all interviewees agreed that clients play the most important role in the overall innovation process. They claimed to be client-centric and focused on customer interests. Thus, clients are considered the most crucial stakeholder, involved from the early stages of ideation to the more advanced stages where the product is refined based on their feedback in the market validation phase.

Connecting this observation to the literature, various sources imply that suppliers are typically the most used allies for product innovation (Johnsen, 2009; Luzzini et al., 2015; Philips et al., 2006; Smals & Smits, 2012). Un et al. (2010) even found that collaborations with customers do not appear to affect product innovation, which contrasts sharply with these findings.

This apparent contradiction can be explained by the type of suppliers involved in beverage companies. The literature often refers to more technological sectors, such as energy or automotive industries, which have suppliers more directly engaged in buyers' activities and thus possessing more advanced practical knowledge. This is not the case in the beverage product supply chains. Therefore, the conclusions from those studies do not apply here.

In these case studies, suppliers are primarily involved in the market introduction phase. When directly asked about innovation partnerships with suppliers, interviewees tended to downplay their relevance in innovation projects. However, they all clearly stated that they valued the innovation levels of suppliers. Even though they did not use suppliers for product innovation, they required them to be innovative to adapt to the necessary changes caused by new products and supply chain disruptions. They also mentioned the importance of suppliers staying abreast of new trends to provide the best possible service to customers.

In conclusion, for Portuguese beverage companies, suppliers are more involved in production and implementation rather than innovation introduction within the company. They play a critical role in process innovation, ensuring that new products reach the market efficiently. This finding contradicts expectations based on the literature but can be explained by the focus of the studied companies on simpler Fast-moving Consumer Goods (FMCG), which do not require the complex production stages seen in other industries. Suppliers are thus crucial for process innovation, chosen for their ability to be fast, aware of current practices, and bring innovation in their areas of expertise, allowing the buyer to focus on other aspects of innovation.

Regarding innovation challenges, the responses from all case studies were quite similar, showing both similarities and divergences from the literature.

The difficulty of identifying and effectively leveraging innovation sourcing strategies, as identified by Henke & Zhang (2010), Jacobides et al. (2006), and Walter et al. (2001), was acknowledged by all companies except Grupo Nabeiro. The primary challenge cited was aligning strategies and timings with partners and deciding which priority to address first, as partners often had differing goals and timelines.

Grupo Nabeiro did not highlight this difficulty but instead pointed to pricing and attracting suppliers as challenges, particularly in the early years when sales forecasts for new products are not very appealing. Central de Cervejas e Bebidas also noted financial concerns as a significant issue.

Regarding the difficulty associated with establishing partnerships (Slowinski et al., 2009), all interviewees agreed with Walter et al. (2001) on the importance of having an initial agreement that includes all strategic considerations for the project. They all start by signing NDAs and clearly defining the partnership's goals and the division of costs and benefits. This strategy was said to mitigate issues in this area effectively.

The challenge of measuring innovation partnership success (Linder et al., 2003) was reportedly managed by all companies using predefined KPIs, thus making it less of a challenge.

When asked about internal resistance to involving external stakeholders in the innovation process (Henke & Zhang, 2010), Sogrape was the only company to report this difficulty. The resistance was not due to extra workload but because daily workers were accustomed to their routines, and having outsiders introduce changes was sometimes challenging. However, all four case studies noted that workers generally recognize the advantages of open innovation.

Lastly, balancing internal and external innovation emerged as a consensus theme. Companies tend to keep their core knowledge in-house to protect their expertise and secrets, while they use open innovation for activities beyond their core competencies. Nespresso and Grupo Nabeiro directly acknowledged this, while Central de Cervejas e Bebidas initially stated that they did not strive for such a balance but later clarified that they keep their beverage recipes internal and seek external innovation outside their core areas. Sogrape also indicated that they kept the development involving their core wine expertise internal, using open innovation mainly for ideation and market introduction, not product development.

Thus, using the phases in Figure 5.1, the overall conclusion was that external stakeholders are involved in the product development phase only for brand extensions. For innovations concerning their core activities, the R&D departments handle everything internally, involving outsiders mainly in ideation or marketing stages.

One observation is that no clear pattern emerged regarding whether specific challenges were more common in certain types of firms or linked to specific characteristics. However, when asked about their primary challenge, Central de Cervejas e Bebidas, unlike the other companies in the study, did not identify a single predominant issue.

While other firms might have mentioned multiple challenges, they were still able to pinpoint the most significant one. In contrast, Central de Cervejas e Bebidas cited several major difficulties, ranging from price requirements and costly research projects and market studies, to brand alignment and setting priorities, without naming any as the primary challenge.

Later, when asked about the possible connection between this fact and their unique position as the only company among the case studies with multiple core beverages, the correlation was acknowledged as reasonable. By diversifying their portfolio across various drinks, they encounter a broader array of challenges, each tied to different brands. This diversification means that rather than facing a singular dominant challenge, they grapple with a multitude of issues simultaneously, making it difficult to single out one as the most significant.

Central de Cervejas e Bebidas manages a larger number of innovation projects simultaneously, as each beverage line has its own distinct projects with different goals. Since these projects are mutually exclusive, the company faces more challenges across various fronts, making it impossible to single out a primary challenge.

Thus, the final proposition is:

> **Proposition 4:** Companies with a single-product focus are more likely to pinpoint a primary innovation challenge, while multi-product firms face a broader spectrum of challenges due to their diverse portfolios. This arises because companies with a range of core products must manage multiple simultaneous innovation projects, as each product requires its own initiatives. This makes it difficult to isolate a single predominant issue. Consequently, multi-product firms experience a more complex innovation process, requiring the management of numerous challenges concurrently.

# Chapter 6

# Conclusion

This thesis explored how innovation sourcing is perceived and implemented in the Portuguese beverage production industry and the outcomes of these practices.

After conducting state-of-the-art research on the topic, studying its advantages, implementation techniques, and identified challenges, the definition of ”Innovation Sourcing” was established as “the acquisition and integration of critical knowledge for new products, services, and processes from external providers, rather than relying solely on internal development.”

To answer the research question, a multiple case study approach was employed, involving interviews with innovation-related professionals from four Portuguese beverage companies.

After analysing each case individually to understand its approach to managing innovation and the evolution of its innovation structure over time, it became apparent that collaborative development with external entities has become a more prevalent source of innovation in recent years, consistent with findings by Kostopoulos et al. (2011) and Rosell & Lakemond (2012).

Key findings include the division of innovation projects into four phases — ideation, viability analysis, development, and market introduction — and the classification of these projects into three types — disruptive, incremental, or commercialization innovation. The relevance of stakeholders in each phase and project type was reported to vary depending on the context. Nevertheless, clients were consistently recognized as the most critical source of innovation, offering ideas in the initial stages and providing feedback for product refinement in later stages.

Companies operating in B2C models engage in more specialised commercialization innovation, developing creative strategies for bringing new products to market, such as product placement or marketing campaigns. This is facilitated by their closer and more continuous connection with customers, which enables the collection of actionable insights. In contrast, B2B companies lack this direct connection and therefore rely more on market studies for customer insights, leading to a reduced focus on commercialization innovation.

When it comes to implementing innovation sourcing, the channels identified by Linder et al. (2003) are adequate, complete and updated to the existing reality in the Portuguese beverage industry. Cosourcing and community sourcing play the most significant roles throughout the innovation lifecycle due to the companies' preference for lasting relationships and their associated benefits. Small and medium-sized firms avoid buying innovation on the market, as it involves fully outsourcing innovation without complementing it with internal resources. This approach is primarily used by large, internationally-owned companies with substantial resources, through M&A processes targeting very specific characteristics. Using venture departments to invest in startups has recently been adopted in the Portuguese beverage sector with success, demonstrating its suitability for this industry. Previously, this approach was only accessible to large, internationally-owned companies with significant financial resources and structures.

Lastly, the primary innovation sourcing challenge consistently identified in the Portuguese beverage industry is aligning project priorities and logistics with partners, as noted by Henke & Zhang (2010), Jacobides et al. (2006), and Walter et al. (2001).

A consensus emerged around the need to balance in-house and open innovation. Companies tend to retain core knowledge internally to protect their expertise and intellectual property, while leveraging open innovation for activities outside their core competencies. Therefore, during product development, this balance is maintained by keeping core expertise internal and involving external stakeholders only in brand extensions.

In addition to aligning project priorities and logistics with partners, other challenges highlighted by the companies include price competitiveness, employees' resistance to incorporating external ideas into established processes, and the pressure of constant time constraints.

Companies with a single-product focus are more likely to identify a primary innovation challenge, while multi-product firms face a broader spectrum of challenges due to their diverse portfolios. Firms with multiple core products must manage numerous simultaneous innovation projects, each requiring its own initiatives, leading to a more complex innovation process.

Ultimately, this study helps fill a gap in the literature on innovation sourcing strategies within a sector that sells products. While the diverse sample of companies used in this research provides greater confidence in extrapolating the results to the broader industry, the study's conclusions are still limited by its small size. Additionally, potential bias from interviewees and the withholding of information due to confidentiality concerns are notable limitations. Future research could expand this study by including more companies, particularly those with characteristics that were central to the conclusions, specifically B2C business models and multi-product focuses, as only one of each was represented in the case studies.

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# Appendix A

# Interview Guide

*Interviewee Profile*

1. Name and organisation.

2. Current position and responsibilities in the organisation.

*Open Questions about Innovation*

3. What role does innovation play in your company?

4. How does your company ensure continuous scanning of innovation for new ideas in methods or products for your company? Give examples.

*Innovation Sourcing Habits*

5. How does your company identify opportunities to leverage external sources for innovation support?

6. Could you rank the following external stakeholders in terms of their relevance for collaboration, using a scale of 1 to 5, where 1 denotes the lowest importance and 5 denotes the highest importance, in enhancing innovation in your methods or products?

| | |
|---|---|
| Suppliers | |
| Clients | |
| Research Companies | |
| Competitors | |
| Other(s) | |

7. Building on your previous answer, could you give some relevant examples to justify your answer?

8. When selecting suppliers, does your company consider their potential to introduce new innovative practices to your company?

9. Which ones of the five channels identified by Linder et al. (2003) does your company utilize for sourcing innovation? Give examples. *

10. Could you provide an overview of standard procedures that your company follows when establishing partnerships for innovation purposes? (e.g. creating agreements where you define responsibilities for each partner, division of risks, costs and revenues sharing, etc.)

*Innovation Sourcing Challenges*

11. What is the most significant challenge you face regarding innovation sourcing in your company? Give examples.

12. How does your company strike a balance between developing in-house innovation and seeking external knowledge? Do you have any strategic approach to discern the types of knowledge preferred for in-house innovation or for seeking external knowledge?

13. Do you believe that the personnel responsible for managing innovation partnerships overall recognize the benefits of innovation sourcing for the company? Are there any measures in place to ensure this understanding?

14. Building on your previous answer, do you perceive any internal resistance to innovation sourcing, possibly due to associated extra workload?

15. How does your company assess the outcomes of innovation sourcing practices and ensure they align with the intended results?

* Table 2.2 was displayed while the question was being posed and answered, allowing each channel to include its definition and an example.

# Appendix B

# Translated Transcriptions of the Interviews

## B.1 Sogrape Interview – Inês Carola, Innovation Specialist

(MC) - Miguel Cabral

(IC) - Inês Carola

(MC) - Hello, Inês. Thank you for making yourself available for this interview. I'd like to begin by asking you to describe your role at Sogrape.

(IC) - Hello, Miguel. I'm an Innovation Specialist, responsible for Sogrape's Internal Innovation program, overseeing the development of projects by multidisciplinary teams within Sogrape that solve problems we identify across various verticals we operate in, ranging from grape production in our vineyards to wine commercialization. However, I also work continuously with external stakeholders who assist us in bringing innovation from outside into our company.

(MC) - In your experience, what role does innovation play in Sogrape?

(IC) - In recent years, the role of innovation has been increasingly prominent at Sogrape. R&D and Innovation are separated into two distinct areas, with the latter department playing an increasingly relevant role in recent years. It's a relatively new department, about 6 years old, and until 2 years ago, it was heavily focused on internal innovation, while R&D was more focused on working with external entities through its extensive network of contacts, which helps us develop internal projects. Since then, we've undergone a team and structural change, now having three distinct areas. We still have in-house innovation, but now we also have an open innovation component where we engage with entities such as startups, universities, and other public organizations, with whom we create synergies. In November of last year, the third area was created - the Sogrape Ventures investment fund, aimed at investing in startups for innovative purposes. Therefore, the role of innovation has been increasingly prominent, evolving to be more focused on open innovation and collaboration with external partners and entities.

(MC) - Your response aligns closely with what is described in the literature regarding the increasing importance of external innovation in recent years. You even touched on some ideas that will be revisited in future questions and that I'd like you to develop further, but for now, I wanted to ask how Sogrape ensures continuous scanning of innovation for new ideas in methods or products to avoid falling behind.

(IC) - Part of the responsibility of the Innovation team is to maintain an active radar for new trends in the sector, staying abreast of developments not only in the beverage or alcoholic beverage industry and wine but also across various industries worldwide to understand what we can draw from other sectors. Through our relationships with universities and other research entities, we also have a well-developed effort to acquire new ideas and concepts through research, ensuring that we have solutions to the challenges we face in the company and that we do not fall behind in continuously acquiring new knowledge.

(MC) - Thank you. Moving on to a section that concerns innovation sourcing habits at Sogrape, considering the following external stakeholders, how would you assess their relevance for collaboration in innovation?

(IC) - All innovation is always focused on the customer, who must have an interest in our product. When I refer to customers, I mean B2B clients, our largest customer segment, but mainly consumers, because even in the case of B2B clients, consumers are always the ones who consume our wines, so the focus is always on them seeing value in our innovations.

(MC) - And how do you ensure communication with these customers? Through surveys or market studies, for example?

(IC) - We always try to have teams conduct tests with the end customer, whether they are consumers or retailers or restaurants. We talk to them to understand their interests and how we can meet their needs. We conduct interviews, but more than that, since sometimes in interviews customers may tell us what they think we want to hear, we need to have observational skills, which are crucial in innovation. For example, we have a team that is challenged with increasing the recycling rate in the restaurant and bar channel, and they often conduct surveys to understand perceptions on this issue. One day, this team observed a lady in a restaurant carrying a glass bin to place it in a larger bin, and she was using a mechanism to help pour the contents of the first bin into the second. This process was too complicated for her: the mechanism for pouring the container was rudimentary and required too much effort from her, so much so that she ended up asking for help. The team raised this issue, and internally, we developed an easier mechanism to assist with this transfer. Therefore, the best way to ensure communication with customers is to be close to them and, more than just conducting surveys, to have the power of observation of their problems.

(MC) - And regarding the other stakeholders, is there any that stands out as relevant for external innovation?

(IC) - As I mentioned earlier, we work extensively with research companies that assist us, with skills we don't have internally, in developing new ways of working. And increasingly, we realize that we have to work with suppliers together to solve problems that are not unique to Sogrape but to the entire industry. An example is glass sustainability. Even though glass is recycled and recyclable – more recyclable than recycled – the glass production process consumes a lot of energy. There is, therefore, much work that can be done in terms of sustainability, and so we try to challenge our suppliers and work with them to improve the sustainability of our bottles. I can also mention something we are starting now through Sogrape Ventures, where we have received many contacts from startups interested in partnering with us or being integrated into our company. These startups can bring us external knowledge, coming from a different perspective than our market, and they may even be developing products for markets other than ours but which can help us have a different vision so that we are not too narrowly focused only on the wine industry, which is our daily business.

(MC) - Regarding competitors, do you have anything in place, or is this stakeholder the least relevant for this issue?

(IC) - It's the least utilized, I wouldn't say least relevant. But we also work with competitors. For example, Sogrape is part of Associação BRP, where several competitors in our sector are involved, and within this association, an initiative to reskill various functions, such as agricultural technicians, was developed. We collaborated in this initiative with Esporão to provide these training sessions to individuals who enrolled in the program. Together, we ended up acquiring knowledge used in other company that we didn't previously have.

(MC) - Thank you. Moving on to the next question, considering this table with the various channels of innovation identified by Linder et al. (2003), which ones does Sogrape employ in sourcing innovation?

(IC) - The case of Sogrape Ventures falls precisely under the "Investing in Innovators" channel. At the moment, we haven't made any investments yet, but we're working towards that goal, evaluating the many startups that have approached us since we started this project in November. As for Cosourcing, it's the model we use the most at Sogrape. We work extensively with technology companies and universities, such as in PhD programs to develop projects for new products and methods. We also engage with the community. One example I can give you was an interaction with university students in Oporto, where we challenged these students to come up with ideas in three different areas: new consumers, new business models, and new services, always with sustainability in mind. Each team developed project ideas for 7 hours and presented them with the support of mentors, both internal and external to Sogrape. The event was a success. We had 3 winners and we are working on its second edition. It was particularly important because we could understand how younger consumers, who are not typically wine consumers, perceive the sector. Some of these ideas were incorporated into Sogrape and provided insights from people outside who see the company and the wine sector in a different way, which can be difficult to see from within. Regarding Buying Innovation in the Market and Resourcing, there is intellectual property sharing with universities for solutions that are achieved together, but we don't entirely outsource the responsibility for this innovation to them, so I wouldn't classify these channels as what we use. We focus more on collaborating in partnerships in a more organized manner to integrate external knowledge in a way that hadn't been done before, but it's a recent topic that we still have a lot to work on.

(MC) - Moving on to some more specific questions that come from the literature review I conducted, there is an indication of suppliers being a key partner in seeking external innovation. When selecting suppliers, does your company consider their potential to introduce new innovative practices to your company?

(IC) - As I mentioned earlier, the focus of innovation is more on the customer. However, that doesn't mean we don't look at other areas. The issue of suppliers is indeed very relevant but perhaps in the opposite way – we encourage their innovation. Although when choosing new suppliers we also look at their potential to create innovation, with Sogrape having more than 80 years of history, we already have a broad network of suppliers, and we try to challenge the current ones so that they also become innovative.

(MC) - And regarding the partnerships you've mentioned, could you provide an overview of the standard procedures that your company follows when establishing such partnerships for innovation purposes? Such as creating agreements where you define responsibilities for each partner, division of risks, cost and revenue sharing, etc.

(IC) - It varies greatly from case to case. For different companies we have different procedures. Typically, NDAs are signed between the various parties to maintain confidentiality. There's also a challenge in sharing intellectual property, which always needs to be discussed before establishing partnerships. But there isn't a general procedure to follow; it always depends on the case. In fact, this is one of the topics we intend to address in the future. We want to make the process simpler and more defined, specifying the areas of responsibility for each partner, which departments will be involved, etc.

(MC) - So, I'll move on to the last part of the interview, which concerns the challenges encountered in seeking external innovation. From your experience, what is the most significant challenge you face regarding innovation sourcing at Sogrape?

(IC) - That topic is very important to us in the Innovation department. As the face of the company for its innovation, we keenly feel the desire of companies, especially startups, to work with us, for example, through Sogrape Ventures. I would say the biggest challenge is our internal capacity to respond to this demand. Being a company with over 80 years of history, with all its processes already well-established, when we try to bring innovation from outside in, it can sometimes be difficult to manage this duality. We have internal teams focused on their day-to-day tasks, which is normal and understandable, and we have the innovation team trying to bring a new mindset and a system with different ideas. Therefore, I would say that internally changing the company's mindset to incorporate external innovations that we see and that have value, which can facilitate many processes and daily tasks, is our biggest challenge.

(MC) - That response aligns closely with what I've found in my research so far. Can you provide an example of this challenge or how you address it?

(IC) - For example, with teams more focused on operations and delivering our products, we sometimes see opportunities to accelerate their logistical processes. However, they are often so accustomed to their way of working that introducing new methods can be challenging, and it takes time to implement changes. This timing is very different from the timing of startups, which is more accelerated. We have many departments and areas in our extensive value chain, from vineyards to marketing, with many internal processes that take longer.

(MC) - And how does your company strike a balance between developing in-house innovation and seeking external knowledge?

(IC) - That's an excellent question. We've learned a lot about it in the last 2 years. In our internal innovation program that I mentioned earlier, we've launched several challenges. Previously, we thought that projects would only be developed internally, relying only on customers for observation and interviews, but the development of the solution to be implemented would be entirely internal. We've realized that it's not quite like that. More and more teams are turning to external partners to develop innovation, with internal teams seeking partners to develop products so that this isn't solely done internally. Therefore, we're increasingly seeing a mix of internal and external innovation. There needs to be increasing complementarity between internal teams, who understand the business and processes, and external teams, who bring new technologies and ways of working, forming a mixed team that isn't closed to internal innovation.

(MC) - So you don't have a specific approach to what you prefer to keep internally and what you seek externally; there's increasingly a generalized mix?

(IC) - Yes. Of course the involvement of external partners depends on the challenge at hand. In the case of recycling, it's obvious that Sogrape alone won't revolutionize the world; there needs to be openness within the glass sector with different associations and waste management entities, such as municipalities, to accelerate and improve the recycling process. Therefore, we always leave it more up to the proactivity of the teams working on these projects to seek partners if they deem it relevant, rather than us who are coordinating the projects and giving them that freedom.

(MC) - Going back to the topic you mentioned earlier about the internal opposition you feel regarding innovation, do you believe that the personnel responsible for managing innovation partnerships overall recognize the benefits of innovation sourcing for the company?

(IC) - We try to promote that understanding, although there may sometimes be difficulties in the speed of implementing solutions with resources external to Sogrape for internal processes. Initially, teams tend to welcome the ideas, but when it comes to implementing them, we start to feel some difficulty in changing the way something has always been done in a certain way. But I would say that, overall, they recognize that these new ideas are beneficial for their role and their daily work. The problem is not because of an extra workload but rather for a certain resistance to change.

(MC) - Lastly, another reported difficulty is evaluating the results obtained through external innovation. How does your company assess the outcomes of innovation sourcing practices and ensure they align with the intended results?

(IC) - It's still a topic that we are developing. We don't have an evaluation process for results yet, but we want to establish one by defining KPIs and determining, in cases where the partnership goes well, what the next steps should be. But we are still in the process of developing this procedure.

(MC) - Thank you very much for your time.

(IC) - You're welcome, it was a pleasure.

## B.2 Grupo Nabeiro Interview – Cláudia Figueira, Head of Innovation

(MC) - Miguel Cabral

(CF) - Cláudia Figueira

(MC) - Hello, Cláudia. Thank you for your availability for this interview. I'd like to begin by asking you to describe your role at Grupo Nabeiro.

(CF) - Hello, Miguel. My position is Head of Innovation, with cross-cutting responsibilities in the company and a priority focus on our core – coffee. Therefore, I'm responsible for managing the entire innovation pipeline of the company based on its strategy – business and product diversification, which leads us to ventures beyond coffee. All launches made outside of coffee fall under the responsibility of my team, which consists of 17 people divided into two main areas: Innovation Intelligence, where we have a technological radar to capture innovation opportunities, and Product Development, which includes both beverage products and equipment.

(MC) - In your experience, what role does innovation play in Grupo Nabeiro?

(CF) - Innovation is a strategic and cross-cutting axis for Grupo Nabeiro. It's part of our growth strategy. The idea is for innovation to be embedded in the business and therefore be a contributor to its growth. This involves being able to introduce products with international potential and thus being a driving force for the company's internationalization as well as for diversification and sustainability, which are essential for our growth. I would say that the role of innovation in Grupo Nabeiro is therefore to anticipate the future. We, the innovation team, have a pipeline that currently has a time horizon of 2 to 10 years, so we're not thinking about tomorrow but rather the more distant future.

(MC) - Still within the scope of broader questions about Innovation in your company, I wanted to ask how Grupo Nabeiro ensures continuous scanning of innovation for new ideas in methods or products.

(CF) - We have several sources of innovation, including the radar I mentioned earlier, which involves technological and market surveillance. This surveillance is often carried out through access to industry conferences and trade shows. In the case of diversification, we broaden our scope to the food sector; we're not solely focused on coffee or beverages but on the entire food industry. We participate in these conferences and trade shows to stay abreast of market trends. I also refer to international trade shows, with the US and the UK being the most dynamic markets in our area, where we continuously seek knowledge. We also have access to papers as a source of knowledge and innovation, with idea generation primarily driven by the Innovation

Intelligence team based on this knowledge. We also closely monitor patents from competing brands. Additionally, through our own network of stakeholders, which is also international, we continuously ensure access to new innovation ideas.

(MC) - Thank you. Moving on to a section that concerns innovation sourcing habits at Grupo Nabeiro, considering the following external stakeholders, how would you assess their relevance for collaboration in innovation?

(CF) - I would say that customers and competitors come first. In second place I would place, among “others”, trade shows, which are seen as training opportunities from which we derive significant value, as well as patents, placing them on the same level. Lastly, but still significantly important, I would include suppliers and research companies.

(MC) - In the case of customers or competitors, can you provide a specific example of a roduct or method that resulted from contact with one of these?

(CF) - Yes, all the products we launch undergo a market validation phase. We have beta testers, meaning users whose feedback is incorporated. For example, there are features in our coffee machines that are ideas from customers. We also have food products that are co-created with customers. I can give you an example: we have a product that was initially conceived internally to be a coffee-flavored yogurt, but it’s now a coffee-flavored dairy beverage that has a range of 5 SKUs and sales of over 10 million cups, making it a highly relevant product for Grupo Nabeiro’s portfolio. It was through interactions with consumers that we realized yogurt wouldn’t make sense, but rather to meet a consumer need for a long, refrigerated coffee-flavored dairy beverage. Customers were also instrumental in understanding that our consumers preferred a beverage that could be refrigerated and sold in this way, even though it wasn’t necessary, and that this would increase sales. Therefore, customers bring a lot of innovation to the group, especially in design thinking, as we transitioned from being hot beverage-focused to also being in the cold beverage category, which involved working with an ingredient, milk, that we didn’t previously work with, necessitating a different logistics and supply chain.

(MC) - And regarding patents or trade shows, which you also classified as being quite important for innovation, do you have a similar example you could provide?

(CF) - Yes. Patents often end up demotivating the innovation and development team because it can feel like everything has already been invented, and technological surveillance is initially used to understand if there’s any risk of infringement when developing a product. We quickly realize that someone has already thought of the same thing and patented it. However, as someone managing the team, I use this as a source of motivation. Finding a way around that patent puts us in a much higher position than the solution we had initially conceived. For example, we have a product called RISE, which is a machine where coffee is extracted upside down, intensifying the natural aroma of the coffee and bringing up a persistent cream, while maintaining the ideal temperature. RISE didn't originate from a patent but from a consumer need we had already identified, and it stemmed from an engineer's idea. However, the final product is the result of 21 patents that we had to review and understand, finding solutions that didn't infringe on other patents and securing a place within intellectual property protection.

(MC) - Thank you. Moving on to the next question, considering this table with the various channels of innovation identified by Linder et al. (2003), which ones does Grupo Nabeiro employ in sourcing innovation?

(CF) - The most important channel is undoubtedly resourcing, followed by cosourcing. With our R&D team in place, we don't have the need to buy innovation from the market, especially because we want to protect our developments. However, in partnerships, when we share resources, there tends to be co-ownership of intellectual property, and as an FMCG company, achieving this level of sharing is always challenging. We also have examples of engaging with the community, particularly our internal community, our own employees. Our corporate internal innovation model is very strong, and a good example of this is the product Go Chill, a ready-to-drink cold coffee beverage, with a convenient and appealing cup ideal for enjoying a break. This product originates from an idea from an employee, which is then validated and iterated with end consumers. I also mentioned partnerships, especially with technology companies and academia, although in the latter, we always face the issue of time to market. As an FMCG company, we're always in fast mode, making it difficult to find research teams that can keep up with thepace demanded by the market, demanded by consumers, not by us. We also have a recent area, about 5 years old, called Delta Ventures, where we invest in innovators and ideas that can grow our organization but are aligned with the strategic axes we develop. An example is the beverage Why Not, a craft soda, made with natural and organic ingredients and alcohol-free, which was created by a startup founded by two young Germans and now has 4 SKUs.

(MC) - Moving on to some more specific questions that come from the literature review I conducted, there is an indication of suppliers being a key partner in seeking external innovation. When selecting suppliers, does your company consider their potential to introduce new innovative practices to your company?

(CF) - As our company already has a great potential for creation and development in its DNA, what we seek from our suppliers is not so much about introducing new innovative practices into our company. Not underestimating this importance, our suppliers are mainly focused on production or implementation, so when it comes to product innovation, the answer is no.

However, in terms of process innovation, the answer is yes. The introduction of innovative practices to make us more agile is one of the most important criteria for us, helping us foster a more innovative mindset, such as in the digitalization of the company. When it comes to products, it's more about compliance with our criteria of cost, time, quality, and standards, rather than bringing innovation into our house.

(MC) - And regarding the partnerships you establish, do you have established standard procedures that your company follows when establishing such partnerships for innovation purposes? Such as creating agreements where you define responsibilities for each partner, division of risks, cost and revenue sharing, etc.

(CF) - Yes, we do have standard procedures, although each project is unique, as innovation projects tend to be. However, our approach typically starts with implementing a NDA to establish confidentiality terms upfront. Only after both parties have signed the NDA do we share the challenge we are facing. What we practice is an open-book policy. This means that development and innovation entail full sharing, and the terms of the relationship are outlined in a contract where the responsibilities of each party are clearly defined, along with intellectual property ownership, which necessitates defining responsibility right from the start.

We operate in a highly competitive and volatile market, the coffee industry, one of the most significant businesses in the beverage sector with major global brands. In such an environment, any misstep in terms of intellectual property can jeopardize a product. Hence, we exercise caution and ensure that our partnership agreements are not just commercial contracts but contracts for the sharing of knowledge and intellectual property. We define under what conditions intellectual property can be used, in which countries, and in which products. Sometimes, the intellectual property generated jointly is entirely ours, and in those cases, our partners may require different, more expensive, supply and development conditions.

Given that we deal with physical products, it's relatively straightforward to delineate the responsibilities of each party. However, the specific procedures may vary depending on the partner's business model. For instance, if they are developers who also produce, the business model differs from that of partners who are solely developers or investors. All these scenarios are pre-assessed with the Legal department and influence the procedures to be followed before establishing a partnership.

(MC) - Moving on to the last part of the interview, which concerns the challenges encountered in seeking external innovation, and starting from a more general question, from your experience at Grupo Nabeiro, what is the most significant challenge you face regarding innovation sourcing?

(CF) - That's a very interesting question, thank you for asking. It varies from project to project, but I would say that we are always under pressure regarding price. Price competitiveness poses many challenges for us, especially when introducing new products. It's often difficult to generate a forecast that is attractive to our suppliers. Despite our efforts to measure consumer interest and willingness to pay, which inform our forecast scenarios, and adopting a conservative outlook, the initial sales volumes in the first two years are never very encouraging for our suppliers. This is because our strategy involves launching first in Portugal and only the following year in our other markets. Consequently, we are not very attractive to suppliers, especially when expanding beyond Portugal.

Therefore, we often find ourselves negotiating not only the production process but also logistical optimization. For example, we may want a truck to transport three product references, but the supplier may only agree to transport one reference per truck. This forces us to purchase a separate truck for each reference to streamline their production line. Thus, our main challenge lies in the competitiveness of our market and its size, which limits what could otherwise be a successful product. Despite having an excellent product, these circumstances often prevent us from achieving a competitive price.

I can also mention internal competition for equipment production in Portugal, which is not so much about product price but rather about investment. The investment required to produce equipment in Portugal is much higher than producing it abroad. For example, technology costs are much lower outside Portugal. In the food sector, the challenge shifts to the unit price of the product, which becomes significantly higher due to the quantities we produce initially, rather than the investment required.

(MC) - Posing now a question about the balance between developing in-house innovation and seeking external knowledge, how do you strike this equilibrium? Do you have a specific approach to what you prefer to keep internally and what you seek externally?

(CF) - Initially, we started by fostering innovation internally. However, we realized that we couldn't accelerate the innovation process if we relied solely on internal efforts. As a result, we began to externalize certain areas of innovation, which eventually led to the institutionalization of this process with the creation of Delta Ventures. This initiative serves two main purposes: firstly, to accelerate innovation, its growth, and its contribution to the business, and secondly, to leverage existing technologies available in the market through ventures.

In our internal innovation efforts, we focus on creating things that don't yet exist, particularly emphasizing disruptive innovation. On the other hand, our ventures may also utilize disruptive innovation, but when it comes to diversification, especially outside our core business of coffee, we try to protect it as much as possible. Disruption within the coffee sector is driven by us internally.

(MC) - Moving on to the next question, another challenge that is mentioned in the literature about innovation sourcing is the possible internal opposition that the personnel responsible for managing innovation partnerships may present to these partnerships. Do you believe that these personnel overall recognize the benefits of innovation sourcing for the company?

(CF) - It's a challenging question to answer. My perception is that most companies, not just in our sector but in others as well, manage innovation through partnerships. This leads to the logic of buying innovation. Therefore, those in charge of innovation departments are merely managing partnerships. What I find very different at Grupo Nabeiro is that we run an end-to-end innovation process, from the concept to the pallet of the product. Typically, companies give the idea to someone else to execute. So, in other companies, my perception, and in some cases it's a certainty, is that yes, those responsible for managing these partnerships highly value innovation from outside sources. Perhaps, even too much, because they end up not developing the internal talent to understand that they have internal human capital and collective intelligence that they can also leverage for the organization's benefit, which is what we believe in. Here at Grupo Nabeiro, I have the reality that exactly because we believe that the movement has to be from inside to outside, and we believe that innovation is something we can foster internally and complement by seeking externally, some people don't believe as much in innovation from outside sources. But that's because we have a different reality. A company that develops its people to be innovative, when that same company says, "let's seek innovation from outside", people may not understand that these two things can coexist in a very positive virtuous circle. Both together allow us to reach faster and with better solutions for our consumers. Here we observe some resistance, that's true. We have people who disapprove seeking innovation externally because they were developed to be one of the innovation drivers within the organization. But it has nothing to do with an extra workload that external innovation brings, either due to its bureaucratic processes or the time it takes to contextualize external contributors. It's precisely the opposite – they see external innovation as a facilitator. However, we also have people who see it positively, which I would say is what happens in most organizations I know, delegating much of the innovation to the other companies they partner with. At Grupo Nabeiro, these two realities coexist.

(MC) - My last question is about another reported difficulty, which is evaluating the results obtained through external innovation. How does Grupo Nabeiro assess the outcomes of innovation sourcing practices and ensure they align with the intended results?

(CF) - We strive from the beginning for strategic alignment with the company we're working with regarding the objectives we aim to achieve. To measure them, we typically define KPIs for the projects. An example is setting a KPI to capture new consumers or to obtain recognition levels as an innovative company through that product. We may also be more focused on its sales or on the use of new channels, so there are parameters we use to evaluate this success and then compare products. But this varies from product to product. Some products are intended to generate volume, others to create value and margins, and others to defend market share. Different products have different objectives, which also depend on geography. The same product can serve one function in a certain geography and a completely different function in another geography. Being present in such distinct markets as Angola and Poland, it's crucial to define these objectives and conduct this assessment of results.

(MC) - Thank you very much for your availability, Cláudia.

(CF) - You're welcome, Miguel. We've covered the big questions and touched on some smaller ones. Congratulations on your work and the very well-structured interview.

(MC) - Thank you.

## B.3 Nespresso Interview – Andreia Vaz, Director of Marketing & Innovation

(MC) - Miguel Cabral

(AV) - Andreia Vaz

(MC) - Hello, Andreia. Thank you for your availability for this interview. I'd like to begin by asking you to describe your role at Nespresso.

(AV) - Hello, Miguel. My position is Marketing & Innovation Director at Nespresso, exclusively for the Portuguese market. My responsibilities encompass all activities related to promoting our Nespresso products to Portuguese consumers and also launching new products. Essentially, it involves identifying local opportunities and launching new products at a local level. In my scope, there's little innovation in terms of creating from scratch, as Nespresso operates heavily with an international team that handles such tasks. However, everything that is created for us and launched by us falls under the category of commercialization innovation, which is within my scope of function.

(MC) - In your experience, what role does innovation play in Nespresso?

(AV) - Innovation plays a fundamental role in growth because when you look at the market, especially the mature market, people like and need new things. Therefore, we know that innovation is a business growth engine. When we launch new products, we work on several areas of the business. Firstly, there's the brand aspect, the perception that the brand has among its consumers of being innovative and bringing new things. Secondly, there's the dimension of purchasing through experimentation because customers buy to try what's new, even if it's for a shorter period, which is essential for creating volume and sales value, bringing people to the brand or retaining those we already have. And of course, there's also a more concrete role in filling gaps in our portfolio in the market, observing what the market offers and what consumers' needs are. Therefore, the role of innovation at Nespresso is fundamental for all these areas, bringing novelty, brand perception, experimentation, and addressing the gaps in our offering.

(MC) - Still within the scope of broader questions about Innovation in your company, I wanted to ask how Nespresso ensures continuous scanning of innovation for new ideas in methods or products to avoid falling behind.

(AV) - It's a very good and interesting question. It may seem simple, but in reality, execution is very complex. At Nespresso, we have a very clear process of strategy, and well-executed innovation is a strategic response. Nespresso has a process that involves several types of strategy. We have a first overarching strategy called GBS, Global Business Strategy, which comes from the global business teams that define what we need to do and which key areas we need to address for Nespresso's business to succeed and continue to grow over the next 5-10 years. The GBS defines this strategy that all markets must follow. Then we have RBS, Regional Business Strategy, which defines how the GBS is adapted for each region. So each region of the world adapts this global strategy to its market conditions. For example, the US market is very different from the European and Asian markets. The characteristics of coffee drinking, rituals, and the type of consumers vary greatly from market to market. Each market has to adapt this strategy to its own reality. Finally, there is a third part, the MBS, Market Business Strategy, where with the guidelines from my region, we see how to grasp these orientations and understand in the market what is really important. The MBS happens every 3 years. So we always have to look at the market with a future perspective, anticipating the future, otherwise it quickly becomes ineffective, and it is in this strategy where we look and understand the trends and realize which points of tension between us and the consumer we need to resolve to grow. That's where we ensure continuous access to new ideas, methodologies, and solutions, serving as a diagnostic moment, as we can identify certain trends for which we have no answer in our portfolio, we look at these opportunities and understand how we can respond to them. There is therefore continuous assessment with this strategy.

(MC) - Thank you. Moving on to a section that concerns innovation sourcing habits at Nespresso, considering the following external stakeholders, how would you assess their relevance for collaboration in innovation?

(AV) - If we're talking about innovation for methods and products, so if it's a very technical question, the most important are research companies, since they give us a technical and scientific competitive advantage. That's why Nestlé and Nespresso have one of the largest research centers in the world. We have the R&D that invests the most in the world in food and beverages to discover new technologies and new techniques for working with beverages. There's even an institute just for nutrition. So, all this scientific and technical part is the most important for innovation in methods and products. But if we're talking about a more open part of innovation before reaching the solution of the product or method, something more strategic, the answer will be more through our consumers, who must be heard first, and through observing the competition to understand what they're doing.

(MC) - So, regarding the second case, where you mentioned customers and competitors, can you give me an example of a product or method that was achieved through interaction with one of these two stakeholders, at least in part of the process?

(AV) - There is always interaction with our customers; we are constantly listening to what they tell us. A concrete example is infant nutrition, which includes baby food and drinks, such as milk. If you think about the category itself, it has always been focused on selling the product, the milk for the baby, where there could be innovation. For example, Nestlé was the first to launch a milk with a hormonal component that mother's milk has, oligosaccharides, which had not been replicated in powdered milk until then. We were pioneers in this innovation in approaching the milk of the mother. But consumers evolve, and over the years, we have been listening to mothers who have made us understand that more than just finding a value proposition on the supermarket shelf that speaks to them about the closeness of Nestlé's milk to mother's milk, mothers want more. So, in open innovation with customers and suppliers, we started to understand that in the ecosystem of mothers, they needed support, namely in what kind of nutrition and feeding to give to the baby from 6 months of age, or how they are supported postpartum. These issues are not specific to infant nutrition, whose objective is to feed the baby, but they concern a mother who goes through many hormonal and mental changes throughout the process of having a baby. Therefore, we started working and identifying partners that helped us in these areas where Nestlé is not an expert. We don't sell postpartum therapy services, but we created projects to be present in this postpartum support, which is so important for mothers, with support in nutrition or telemedicine. Open innovation with these partner companies was used to understand how they were operating and to find opportunities of how we could support them. In this context, we also made acquisitions, for example in Germany, where a startup providing telemedicine was acquired. In this example, there is no technical product innovation but an expansion of intervention in this category where we went further to give our consumers support that they would expect from a brand as famous and reputable as ours.

(MC) - Thank you. Moving on to the next question, considering this table with the various channels of innovation identified by Linder et al. (2003), which ones does Nespresso employ in sourcing innovation?

(AV) - This table seems very fitting for the existing reality. Starting with the first, we don't tend to Buy Innovation in the Market except in cases of M&As, where the objective of that specific department of Nestlé is to seek to buy innovation in the market, ideas that already exist and work, or possibly acquire specific technology. But typically, we acquire the company; it's not so much at the market level, being more done at a global level and not from an R&D perspective. Investing in innovators, on the other hand, aligns completely with the example I gave you about the German startup in telemedicine for postpartum support.

Then, regarding cosourcing in terms of open innovation, where we seek partners that have innovation that we don't have and ally with them for competitive advantages, I have as an example a partnership we made with GoodBag, an Austrian startup that created a tote bag containing an NFT inside it. Every time the bag is used, it is scanned, accumulating points, which are then contributed to activities for the planet's sustainability, such as planting trees or cleaning oceans, through NGOs collaborating with GoodBag. With this partnership, GoodBag went from just contributing to NGOs with each use to, with our support, adding a new variable to the model – certain products of ours. When these particular products were purchased, more points were added, and we redirected part of the product's money to the NGOs. Another partnership with this same startup occurred when we gave them the challenge of transforming on-the-go coffee consumption, by asking them to design a sustainable mug so that a paper cup isn't used every time you go to a café. And so, like the bag, a reusable mug was designed, the GoodCup, which also has the same points system for environmental sustainability as the GoodBag.

Regarding Community Sourcing, I have an example of a project I participated in, the Consumer Co-Lab, which involved inviting consumers to be part of a restricted group that tested new products, provided feedback, and generated ideas with us. We have many people in this project, and we conduct small meetings where, for example, if there's a new packaging for a beverage, we show images of various versions of this packaging to 4 customers and ask for their opinion, to know what it communicates to them and what they would do differently. In fact, this group was used to gather opinions about the GoodBag I mentioned to you. The best and most used innovation technique is always this: low risk, small pilot tests, and gradually growing, the Lean Process, gradually changing and adjusting the product.

Lastly, resourcing. We can do it if there's a very specific need. Last year, we worked with EntoGreen, a company specialized in producing and cultivating insects for human consumption and also for organic soil fertilization, fuel, and recycling. As part of this resourcing, it was discovered that one of these insects consumes plastic, which can be revolutionary in terms of recycling. And also, we achieved products with insects with the expertise of this company, such as cookies and pancakes, which were then also tested in the Consumer Co-Lab.

I just wanted to add that at Nespresso, we don't tend to have as many product root innovations coming from external sources; these come from Nestlé's food science engineers in Switzerland, all internally. We focus more on service innovation, like the examples I gave you. For instance, we recently created an innovative product, the Nespresso Lisbon BICA, a new coffee capsule whose blend is entirely new, not existing in our portfolio, and was introduced to the Portuguese market due to its desire for a stronger, bitter flavor, contrary to South American and Asian coffees. This entire blend was done internally, in Switzerland, without the intervention of entities external to Nestlé, and we in Portugal handled the commercial innovation, creating the launch commercial plan, where we decided on the location, quantities, and price, as well as the communication of this launch.

(MC) - Thank you for your very complete answer, reaching every innovation channel that you do and do not use. Moving on to some more specific questions that come from the literature review I conducted, there is an indication of suppliers being a key partner in seeking external innovation. When selecting suppliers, does your company consider their potential to introduce new innovative practices to your company?

(AV) - Yes, definitely. I've worked precisely on understanding the opportunities we had and areas where we wanted to complement, what types of partnerships and suppliers we should seek, and the example of EntoGreen I mentioned is exactly that, as the company was both a research partner and a supplier. So, yes, we always consider the potential of suppliers to bring new practices to our company. Another good example is due to our business model, which is direct, unlike Nestlé. We only sell products directly to the consumer; we don't use supermarkets. Sales are either on our website or in our boutiques. And when we make sales on the websites, the supplier we choose to handle the deliveries is the one we believe brings us the most innovative advantage. I can't tell you the name of the supplier for confidentiality reasons, but they were chosen because they are highly innovative in terms of supply chain and logistics. They increasingly use A.I. and cutting-edge technology and automation. For example, they're now implementing a new fully automated dispatch plant, and this has high advantages for us because we want to provide our customers with a high-quality, fast, and even personalized service, which we're also working on with this supplier, as our brand is of high quality and we want the service to be personalized when it reaches the consumer, such as having a delivery person wearing a Nespresso logo shirt and engaging in conversation with the customer. This is an excellent example of a supplier that we chose because they bring innovative practices in their services for our customers.

(MC) - And regarding the partnerships you establish, do you have established standard procedures that your company follows when establishing such partnerships for innovation purposes? Such as creating agreements where you define responsibilities for each partner, division of risks, cost and revenue sharing, etc.

(AV) - There are many defined procedures, the question is very broad because the process has several phases, and the answer depends on which phase of the process we are in when establishing the partnership. For example, when starting an open innovation contest, and we go to the market to approach experts operating in areas where we don't operate, we have to clarify the objective of the program, what type of response we need from the market, and what the rules of the partnership are. In a more advanced stage where we already have selected ideas, we move on to having an agreement, which is usually simple. We establish the investment of each party, as happened with GoodBad. This occurs in cases where we choose partnerships instead of buying the company or shares of it, which can happen in cases where we don't just want support with technology and expertise. All of this depends on how the pilot initially goes and the importance of the discovery to the business.

(MC) - So, I'll move on to the last part of the interview, which concerns the challenges encountered in seeking external innovation. Starting from a more general question, from your experience at Nespresso, what is the most significant challenge you face regarding innovation sourcing?

(AV) - This is also a good question. In innovation, there are many challenges at the same time, not just one. But if I have to highlight the most significant one, it's deciding or discovering exactly what problem we are solving, which may seem simple but isn't, especially in very large companies where we have many problems and so much information, and we have to identify the most essential one that will transform the business.

(MC) - Posing now a question about the balance between developing in-house innovation and seeking external knowledge, how do you strike this equilibrium? Do you have a specific approach to what you prefer to keep internally and what you seek externally?

(AV) - Everything related to our core expertise, product development in the categories we already know and dominate, is an expertise that we employ and do not want to share; we have many R&D secrets. For all brand extensions and core innovations, we innovate internally, privately, and confidentially without sharing. However, for what is beyond the core, where we seek more complex solutions to our problems, such as the R&D Accelerator program we have, we look externally for innovation and open our doors wider to have other perspectives.

(MC) - Moving on to the next question, another challenge that is mentioned in the literature about innovation sourcing is the possible internal opposition that the personnel responsible for managing innovation partnerships may present to these partnerships. Do you believe that these personnel overall recognize the benefits of innovation sourcing for the company?

(AV) - I would say yes. Here, I would say we are very outward-looking, focusing on what the external environment can offer us that we do not have internally. In fact, the R&D program I mentioned earlier, the R&D Accelerator, was globally created precisely to seek solutions outside of Nestlé for very specific problems. In this program, during 6 months, opportunities are identified, solutions are developed, and pilots are conducted, all at a highly rapid pace. The accelerator involves three types of contributors in these phases: employees, universities – which can be in areas related to food or design – and startups working on the relevant themes and applying for this process because they believe they can bring value to that project. Therefore, we are increasingly a company focused on external collaboration.

The problem with innovation in Portugal is another one. For many years, innovation was always encapsulated in marketing, being solely associated with the product. But I think that has changed in the last 10 years, and we have started to have teams dedicated solely to innovation. These are very different disciplines. Innovation in commercialization can and should be linked to marketing because it involves bringing products to market, but innovation in creation, in solving root problems, is not the same task as marketing. It requires thinking differently, with different methodologies, thoughts, and actions. And more and more there are companies, institutions, and even universities working on innovation, serving as accelerators.

(MC) - My last question is about the closure of such projects. Another reported difficulty, which is evaluating the results obtained through external innovation. How does Nespresso assess the outcomes of innovation sourcing practices and ensure they align with the intended results?

(AV) - There are metrics. Before starting the project, we have metrics for innovation contests, such as the number of applications we receive and how many international companies apply. This helps us understand if we reached the right companies and if we provided a good briefing for what we were looking for. At the end of everything, when the solution is created, we compare the conversion rate versus the number of pilots, which indicates if we had the right people and if we achieved the solutions. For example, last year, out of 10 projects, 5 advanced, which is highly successful. A conversion rate of 50% is very high; 10% or 20% is not bad, having 1 or 2 pilots following through. This meant that we believed those projects could work. Then, of course, we look at the results of the pilots, if we achieved the business objective, where we evaluate if people value the advantages of our idea and if people use the product. However, each project has different KPIs, which could be sales, or selling a product in a retailer, or reaching a number of users, as was the case with GoodBag.

(MC) - Thank you very much for your availability, Andreia.

(AV) - You're welcome, Miguel. It was very interesting for me to consider some of these questions. Some of them were particularly thought-provoking and prompted me to reflect on aspects that I don't typically contemplate during my day-to-day work, as they've become almost second nature to me.

(MC) - Thank you.

## B.4 Central de Cervejas e Bebidas Interview – Diogo Vinagre, Innovation Project Manager; Teresa Sampaio, R&D Technical Project Manager

(MC) - Miguel Cabral

(DV) - Diogo Vinagre

(TS) - Teresa Sampaio

(MC) - Hello, Diogo and Teresa. Thank you both for making yourselves available for this interview. I'd like to begin by asking each one your roles at Central de Cervejas e Bebidas.

(DV) - My role is Innovation Project Manager in the Planning area. My responsibilities involve connecting various stakeholders in Marketing and Sales with Production stakeholders, ensuring that tasks are performed as planned to bring the project to fruition if it makes sense. So, my job is to coordinate different people and responsibilities within the company to successfully execute the project.

(TS) - My current position is R&D Technical Project Manager. My responsibilities involve technically coordinating project implementation, being responsible for the technical aspects and ensuring that everything from formal validations to reports happens smoothly, whether I do them myself or delegate to others. I end up working closely with Diogo because we both coordinate all the projects and act as a bridge with the Marketing and Sales area. When projects are turned over to the market, those departments take the lead.

(MC) - In your experience, what role does innovation play in your company?

(TS) - Innovation plays an important role. Part of our income is derived from innovation, which varies depending on the range of beverages we are talking about. There are different innovations for different products, with Sagres having its own characteristic innovation, Heineken another, and so on. We have two business areas: beer and cider beverages, with affiliates like Heineken, Sagres, and Bandida do Pomar, and nonalcoholic beverages, such as Luso water. Innovation ends up being a factor in energizing these two aspects, such as Bandida do Pomar introducing a new flavor every year to revitalize the brand. In the case of Luso, innovation is closely linked to sustainability. For Sagres, there is an innovation component more tied to Portuguese identity and football. Innovation is much more than being disruptive or launching a new recipe; it also contributes to the brand's strategy. Therefore, innovation is an ally that keeps brands alive and helps them chart their strategic course. However, innovation metrics and market insights, which assist us in understanding the position of the brands and the path to follow, are the responsibility of our Marketing colleagues.

(DV) - Adding to what Teresa said, indeed innovation plays a very important role and is present in all our brands at different levels, meaning that depending on the brand's objective, innovation can be more deeply explored. Sometimes innovation appears in a more complex form, such as creating a new flavor, while other times it takes a simpler form, like changing the brand image, as in the case of football with Sagres. It depends on the brand's objective: it can be to gain visibility and make the brand grow, or to target a new consumer profile, such as when a beverage that was only available in bottles is now also available in cans, appealing to a different consumer profile, something more on-the-go, and innovation helps us take the brands to new places and make them even better.

(MC) - How does your company ensure continuous scanning of innovation for new ideas in methods or products to avoid falling behind?

(DV) - This can come from two fronts. Usually, it can come from the need to respond to the market, supported by market research to understand trends and what the market wants and consumers need, helping us to develop innovations, whether in flavors or formats, that meet those needs. So, it comes from outside to inside. Then, we can also have innovation that originates from assumptions or ideas that come from inside to outside, meaning it's not directly the consumer showing that need but rather us bringing it to the market through excitement, such as when we create a different product that has never existed before, or a packaging that the customer has never seen. This can be supported by internal research, knowledge that we have internally, or with the support of partners and suppliers. For example, our glass supplier has an idea for a more sustainable bottle, and we bring that to the market. This is contributed by constantly wanting to understand market trends and consumer preferences, as well as understanding what we would like to invest in, always with a sustainability factor and a differentiator for our brands.

(TS) - Exactly. I would just add that we have to consider our positioning. In addition to consumer tests and market studies, we need to look at the commercial aspect, benchmarking against our competitors, from which we draw insights to understand where we stand. Through this process, we identify new needs that are gaps we have in the market. So, we have a methodology for making these evaluations with a certain routine to understand what is happening around us, with the commercial teams providing inputs and always being present in the innovation process. And here, we also challenge suppliers to see how far we can go in innovation with them.

(MC) - Thank you. Moving on to a section that concerns innovation sourcing habits, considering the following external stakeholders, how would you assess their relevance for collaboration in innovation at Central de Cervejas e Bebidas?

(TS) - In an innovation process, there are several phases. The first is the front-end, where we observe market needs and brainstorm ideas. As we progress in a project, we enter a phase of realization, where we assess the feasibility of this project. In the first phase, the main stakeholders are the customers, with their inputs.

(DV) - I agree, we are client-centric. And that's why I would also place research firms second, to gather market insights.

(TS) - Yes, tied with competitors, because we need to stay aware of the rest of the market. Next, suppliers, because sometimes they also provide us with innovative ideas. Adding a new stakeholder, tied with suppliers, I would say companies from other markets, whether it's other sectors besides beverages or abroad. Having visibility on how other markets are innovating is also one of our inputs.

(MC) - Since you both highlighted customers as the primary stakeholder regarding importance for external innovation, can you provide a specific example where an innovation resulted from interaction with customers?

(DV) - Yes, we have several SKUs that are directly tailored to customers' needs. I would say a basic example is when customers often approach us with a need for differentiation, to which we respond by creating new SKUs. In doing so, we often adjust the product's logistics chain to match the customer's logistics chain, meaning we create formats that are efficient for the customer to transport and place directly in their store upon receipt, something we wouldn't do on our own. This proves that communication with the customer prompts us to adapt. Another simple example, I can't disclose the brand name due to confidentiality reasons, but there was a brand that was growing but only in bottles. However, in our coffee shops, restaurants, and bars channel, we received feedback that this brand should be available on tap due to demand. So, we innovated and made it available in kegs as well. Therefore, customers, understood in a holistic sense, such as the market, often show us windows of opportunity for new ideas and adaptations to which we respond.

(MC) - And besides customers, is there any other example, such as involving suppliers, that you can provide of how they were engaged in an innovation that resulted in a new product or method?

(TS) - Yes, for example, with one of our barley suppliers located in Alentejo, we partnered to create a new beer, Bohemia beer, which resulted from a need identified by them to create a beer made entirely from Alentejo barley, more geared towards people from this region, as there is a sustainability component, local sourcing, with the aim of promoting Portuguese barley. We were already using it, but we didn't have any of our own references, since Portugal doesn't produce enough barley for all of our beer, so it was necessary to find ways to use only national barley for Bohemia beer, and this was only possible due to our partnership with this supplier. This example is noticeable to the consumer, but we also have examples that are not, such as when we optimize packaging to make it more sustainable and cost-effective, and this is done in very direct contact with suppliers who help us achieve these goals. This last one is not an example of disruptive innovation as before, in terms of market innovation with the creation of new products, but of optimization innovation.

(MC) - Thank you. Moving on to the next question, considering this table with the various channels of innovation identified by Linder et al. (2003), which ones does your company employ in sourcing innovation?

(TS) - From our perspective, I think Community Sourcing is the most used, by far, even from the examples we've discussed of market research and generating ideas with clients. At the global brand level, with HEINEKEN, there's also investment in innovators, but this is done internationally and arrives here finished, but it's not our focus at Central de Cervejas e Bebidas. Then, there is also cosourcing, like the example of communication with stakeholders for creating new products and packaging, but also partnerships for internal research with universities and students for Master's or PhD theses.

(DV) - And we resort to Resourcing, for example, when we need a product and don't have the technological capacity for it, using this channel in order to not disrupt our normal business model. An example is a product that we wanted to integrate, which are smallscale beers, craft beers, where to avoid disruptions in our normal factory capacity, which is geared towards another scale, we resort to resourcing for its production. In this case, it's a partnership with a craft brewery that produces for itself and helps us with these new products for our catalog, allowing for a greater offering from our side. It's a resourcing in a technological aspect, the partner has the implemented technology and a business model for these products, and we resort to them for that. The same happens in Wines, a category that we sell to the market but don't produce because our core is beer and water. The production and supply are done by a partner that already has the know-how, technology, and business model implemented for it. This way, we can offer innovative products that would otherwise be difficult.

(TS) - And this resourcing can sometimes be used only in an initial phase. I remember a pilot phase of an innovation project I worked on, which was a 10-liter bottle of Luso water, and at the beginning, it was an external company that produced it. Then we worked on it and managed to integrate this innovation into our production capacity. Introducing innovative products is difficult for us because we have a lot of volume, and outsourcing production resources, even if it's just in an initial phase, helps a lot.

(MC) - Moving on to some more specific questions that come from the literature review I conducted, there is an indication of suppliers being a key partner in seeking external innovation. When selecting suppliers, does your company consider their potential to introduce new innovative practices to your company?

(TS) - That's indeed a criterion, and it's one of the points used for supplier evaluation. The aspect of development and meeting our need for new products. In fact, when we are considering the introduction of a new supplier, the Innovation department, along with the Planning department, work together to, in a first meeting, assess how we will implement this new supplier, and from the outset, we gauge their inclination towards innovation.

(DV) - Essentially, suppliers are the ones who are knowledgeable about trends in their industry. For example, our cardboard supplier, since we don't produce cardboard ourselves, must be the one to bring us the added value and innovations they see in the market. That's why it's very important for suppliers to be innovative, and we consider that an important criterion. Often, suppliers are our partners who help us reach solutions, which are created together. Besides providing their product for sale, they also contribute innovation and support us in their area of expertise.

(TS) - And often, there's a direct link between this and the quality of the product. It's also important for the supplier to be agile because when, for example, a supplier brings a new technical design of a box, we have to validate the quality aspect before using it. The supplier needs to be agile with us if, for example, we request certain characteristics of this box.

(MC) - And regarding the partnerships you've mentioned, could you provide an overview of the standard procedures that your company follows when establishing such partnerships for innovation purposes? Such as creating agreements where you define responsibilities for each partner, division of risks, cost and revenue sharing, etc.

(TS) - It's quite case by case, but there's still a procedure. In the case of materials or raw materials, some of these agreements are made globally and therefore don't go through us. What's consistent is the partnership code of conduct with our suppliers, which is always followed, as well as the confidentiality agreement. Regarding innovation costs, everything is pre-contracted.

(MC) - So, I'll move on to the last part of the interview, which concerns the challenges encountered in seeking external innovation. From your experience, what is the most significant challenge you face regarding innovation sourcing at Central de Cervejas e Bebidas?

(TS) - One of the major barriers is cost. Market studies can be very expensive. Another barrier is aligning strategies with our partners. We've had suppliers tell us they have a new packaging that's much more efficient and will attract new consumers, but then it doesn't fit into our production lines. Sometimes we have optimization innovations that are good, but it's not the right time to implement them because we might already have change plans that aren't compatible with that innovation at that moment, no matter how beneficial it may be. Sometimes, aligning the right moment with the right opportunity is the biggest challenge. Other times, it's about brand positioning, because we often receive very good innovation ideas from suppliers of flavors, for example, who provide samples of the flavors that are being widely used and sold in the rest of Europe. One day, they proposed a certain flavor for our Luso water, but we felt that it didn't make sense, it didn't align with our brand vision. So, sometimes there are many ideas, but we can't apply what isn't opportune. Communication to achieve common goals is a challenge. Therefore, I would say that investment and feasibility are the two biggest challenges we face in innovation sourcing.

(MC) - And how does your company strike a balance between developing in-house innovation and seeking external knowledge?

(DV) - We don't necessarily seek that balance; it naturally occurs depending on the type of project. For example, when working on a new flavor, we seek external assistance from our suppliers to understand what exists in the market. But if it's a project to optimize the quantity of a certain raw material, then it's an internal innovation where we don't involve anyone externally. However, most projects involve both aspects. In the ideation phase, there's often external input from both customers and suppliers, as we discussed earlier, and during implementation, it depends on whether we have the necessary expertise or not.

(TS) - The most common scenario when developing a new product from scratch is that the recipe is innovated internally. However, if we want packaging with specific features to promote that product, we have to turn to suppliers who have this expertise. But if that's not the case, and we only want to innovate on the recipe while keeping the packaging the same, we handle everything internally. There must be flexibility to use internal resources and, when necessary, resort to external ones. One example occurred last year, during the Women's World Cup, when we put the images of the Portuguese national team players on the beer caps. This was an innovation idea that came from a supplier, and we seized it and developed it ourselves.

(MC) - Another challenge that is presented in the literature is the way the personnel perceive innovation sourcing, as there are cases where they may not follow its benefits and provoke internal opposition. Do you believe that the personnel responsible for managing innovation partnerships overall recognize the benefits of innovation sourcing for your company?

(TS) - I don't feel that challenge here; these benefits are recognized. Also, because we are used to approaching external stakeholders, whose responsibility for innovation is not entirely delegated to them, but rather, in an operational sense, their participation is recurrent, and we work very closely with external partners. These entities are not even seen as external since it's a win-win relationship where both parties benefit when there are new products or operational optimizations.

(MC) - Lastly, another reported difficulty is evaluating the results obtained through external innovation. How does your company assess the outcomes of innovation sourcing practices and ensure they align with the intended results?

(DV) - There are metrics to evaluate all projects. Working in a product industry, where the goal is to create strong brands and sell those products, there are various metrics. Sales metrics, such as volume, or market share, or awareness, which make it easy for us to see if the innovation paid off. Others are not as tangible because they are not about financial return but rather about the positioning we want to achieve with that innovation. We always evaluate from both perspectives to see if we achieved the objectives we set, such as reducing production costs. There is always a post-project evaluation, for example, 6 months after it ends, where we review this data and see what worked or failed so we can make necessary changes.

(TS) - Exactly, at the beginning of the project, we set ourselves several key criteria, and at the end, after it has been implemented for a few months, we compare and determine the reasons for any discrepancies that exist. If at any point something went wrong due to a failed external partnership, we can identify it at that time. Another evaluation we conduct is throughout the project, where we see if we were able to meet the deadlines we set. When suppliers commit to developing a certain deliverable in 3 weeks but end up needing 4 or 5, that is evaluated and impacts the supplier evaluation we conduct twice a year, which could result in the termination of the partnership.

(MC) - That's all, I want to thank you both very much for your time.

(TS) - You're welcome. Feel free to reach out in the future in case you need something else.

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