



How sustainable strategies are learned and shared: Translating sustainability in the Portuguese wine industry

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Abstract

Title: How sustainable strategies are learned and shared: Translating sustainability in the Portuguese wine industry

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The purpose of this study is to understand how sustainable strategies in the wine industry are translated as they travel across social and political boundaries. Using the translation theory, I conducted a multiple case study with three Portuguese wine producers, in order to determine which key factors led them to learning about and selecting the sustainability strategies that they used. The results showed that the will and determination of the managers, the collaboration of many key players and knowledge sharing programs were important factors which led to the implementation of sustainable strategies in wine production. Furthermore, for each organization, achieving their goals for social sustainability were key components in helping them achieve environmental and economic sustainability goals.

Keywords: wine, wine producers, sustainability, strategies for sustainability, translation theory, organizational change, ideas travel, Portugal, Alentejo

Resumo

Título: Como estratégias sustentáveis se aprendem e partilham-se: Traduzir sustentabilidade na indústria do vinho Portuguesa

Autor: Sara Lafond

O objetivo deste estudo é perceber como as estratégias sustentáveis na indústria do vinho são traduzidas, enquanto navegam entre os limites políticos e sociais. A utilizar a “Translation theory”, conduzi uma estratégia de estudo de múltiplos casos, em que consistiu em entrevistar e observar três produtores de vinhos Portugueses com o objetivo de determinar os fatores chave que os levou a procurar aprender mais e escolher as estratégias utilizadas.

Os resultados mostraram que a vontade e determinação dos gestores, a colaboração de pessoas chave e eventos de partilha de conhecimento foram fatores fundamentais que direcionaram a implementação de estratégias sustentáveis na produção de vinho. Além disso, para cada organização, atingir seus objetivos para a sustentabilidade social foram de facto, importante fatores que os ajudaram a realizar objetivos ambientais e económicos no âmbito da sustentabilidade.

Palavras Chave: vinho, produtores de vinho, sustentabilidade, Portugal, Alentejo, Translation theory

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1. Introduction

The agricultural and agri-food industry is one of the most important industries, if not the most important, that exists. Aside from producing the food that we eat, this industry also currently employs approximately 26.7% of the global population (FAOSTAT, 2021 a) and makes up 4% of the total global GDP (World Bank, 2022). However, while agriculture and food production are essential industries, the way that we are currently producing our crops and raising livestock is not sustainable. According to the FAO (2019), the agriculture and agri-food industry is the second largest contributor in terms of global emissions, with the energy sector being the first (FAOSTAT, 2021 b). Moreover, due to a combination of a changing climate, harmful agricultural practices, and other major factors, such as the recent Covid-19 pandemic, global food insecurity has only been increasing (*The State of Food Security and Nutrition in the World 2022*, 2022). To address these concerns in the agricultural sector, it is necessary to create innovative solutions in order to ensure that food and other agricultural products are produced sustainably (Polita & Madureira, 2022). According to Polita et al. (2022), the solutions to these current issues will be brought forth by “new and transdisciplinary knowledge” (Polita & Madureira, 2022).

In Portugal, the agricultural sector makes up 2.3% of the country’s total GDP, as of 2021 (*MarketLine Country Profile: Portugal*, 2022). There are three main agricultural products that account for one third of Portugal’s agricultural production, which are wine, fruits and vegetables (*MarketLine Country Profile: Portugal*, 2022). Although Portugal may be considered a small contributor on a global scale to the agricultural industry, it is still necessary for producers in the agricultural sector to adopt innovative agricultural practices, in order to adapt to a changing climate and be able to continue producing. It is simple to say that the agricultural industry needs to adopt innovative solutions to produce more sustainably, however there is a lack of information of how managers in this industry can learn about and implement these solutions and ideas in their business models. This study aims to analyze one of Portugal’s main agricultural sectors, the wine industry, and how some Portuguese wine producers have made the decision to adapt their business models to produce more sustainably.

To contribute to fill this gap, I propose to answer the following research question:

How do Portuguese wine producers adopt sustainable strategies?

The answer to this question is relevant for wine industry professionals, since it provides valuable information on how they can implement sustainable practices in the production and distribution of wine. It also provides insightful and interesting information on how best practices and ideas in the wine industry travel and contribute to organizational change. This study is also relevant for consumers of wine, who can learn more about the ways that wine can be produced in a sustainable manner.

In order to answer the research question, I used a qualitative research approach. More specifically, I conducted a comparative case study approach was chosen, whereby semi-structured interviews and direct observations were conducted with three case studies. The three wine producers that were chosen as case studies for this dissertation were the following: Cortes de Cima, Esporão and Coelheiros.

In this dissertation, a review of relevant literature will first be presented, which will provide an overview of the wine industry and sustainability in the wine industry as well as define the key terms of the research. Next, in the methodology chapter, the selected research approaches and the process of the data collection will be presented. The empirical setting chapter provides background information on each individual case and the strategies for sustainability in wine production that are being implemented. The findings and discussion chapters will both present the results of the study, as well as an interpretation of these results. Finally, in the conclusion, the answer to the research question will be presented, as well as the limitations of the research.

2. Literature Review

In this chapter, a review of relevant literature will be provided. The wine industry consists of the following product categories, which are still wine, sparkling wine and fortified wine (*MarketLine Industry Profile: Wine in Global*, 2022). While the wine industry is expected to continue to grow in the future, there are many environmental concerns, such as infertile or dead soils or lack of water, that will greatly impact the industry and make production a lot more difficult, if not impossible. There are many strategies for sustainability in the various stages of wine production that have already been adopted by certain wine producers in order to be able to adapt to a changing climate and continue producing quality wine products.

This review of literature will first discuss and provide an overview of the wine industry, both on a global scale as well as specifically in Portugal. Next, the different stages of wine production will be defined, and the current environmental issues in the wine industry as well as some more common strategies for sustainability will be presented. Finally, the last chapter of this section will present the concept of the translation theory of organizational change, providing some background information for how the findings will be presented.

2.1: Wine industry

2.1.1: Global wine industry

The global wine industry has existed since antiquity, with Ancient Egyptian, Greek and Roman civilizations being known to have the first culture of wine (Orth et al., 2007). At this time, these civilizations already recorded and distinguished wines based on their regions of origins and fabrication dates (Orth et al., 2007). Between the medieval period and the 19th century, wine in Europe became very established, where certain wine regions and producers became distinctively known for producing higher quality wines (Orth et al., 2007). Wine has always been a product that has been consumed both locally, near the vicinity where it is produced, as well moved across borders to be consumed globally (Orth et al., 2007). Up until recent years, wine had been a product that was less commercial and more frequently consumed by wine enthusiasts (Orth et al., 2007). Today, the wine industry has become more commercial, with most wines being available for purchase through retailers such as supermarkets (Orth et al.,

2007). As previously mentioned, the wine industry includes still wine, sparkling wine, and fortified wine (*MarketLine Industry Profile: Wine in Global*, 2022).

On a global scale, wine producers are divided by two sub-categories: Old World wine producers and New World wine producers (Aleixandre et al., 2016, 389). The Old World wine producers are from Europe, with a long history and tradition of winemaking, while the New World wine producers are from countries such as the United States, South Africa and Chile, in which wine production is still relatively new (Aleixandre et al., 2016). Up until the end of the 20th century, Old World wine producers held most of the market share of the global wine industry (Orth et al., 2007). In recent years, however, the New World producers have been rapidly catching up and gaining a larger market share (Aleixandre et al., 2016, 390).

In terms of organizations, the global wine market is largely fragmented, with mostly small and medium enterprises in the industry (Gilinsky et al., 2016). More specifically, the wine producer with the largest market share on a global scale, E&J Gallo Winery, holds a market share of only 5.7% (*MarketLine Industry Profile: Wine in Global*, 2022), further demonstrating how fragmented the wine industry is. It is important to note that the wine industry is more fragmented in Old World countries, where it is much more common for wine producers to be from small-scale family estates (Simpson, 2011). In New World countries, the wine market is much more concentrated (Simpson, 2011). The industry overview for wine indicates strong growth: in 2021, the global wine industry grew by 2.7% and between 2021 and 2026, it is expected to grow by 36.8% (*MarketLine Industry Profile: Wine in Global*, 2022). Europe is the geographic region that consumes the most wine, with a consumption level of 56.7% of the global wine market (*MarketLine Industry Profile: Wine in Global*, 2022).

2.1.2: The Portuguese wine industry

Portugal is the 11th largest wine producing country in the world, with a long history of producing wine (Cunningham, Lisa, 2019). Being a traditional winemaking country, Portugal is considered an Old World wine producer. The history of wine in Portugal can be traced back to when the Romans occupied Portugal (Faria et al., 2020). Wine has been historically produced throughout the entire country, however over time, some regions became more highly specialized in wine production (Panzone & Simões, 2009).

Although wine is one of Portugal's top three agricultural products, the area of land covered with grape vines for winemaking has been decreasing (*Evolução Da Área Total de Vinha - Portugal*, n.d.). Between the years 2000 and 2021, the area of land with grape vines went from 241,286 hectares to 192,028.84 hectares in Portugal (*Evolução Da Área Total de Vinha - Portugal*, n.d.). The most commonly used grapes for the production of wine are the following: Aragonez (11% of the types of grapes used), Touriga Franca (7%), and Touriga Nacional (7%) (*Castas Mais Utilizadas*, 2018). The three main wine producing regions in the country are the Douro region, with 1,614,569 hectolitres produced between 2021 and 2022, the Lisboa region, with 1,339,162 hectolitres between 2021 and 2022, and the Alentejo region, with 1,289,473 hectolitres between 2021 and 2022 (*Evolução Da Produção Nacional de Vinho Por Região Vitivinícola*, n.d.).

While wine production trends for many Old World producers has recently been recently negative, Portugal continues to grow positively, with an increase of production of 14.65% between 2020 and 2021 and 9.66% between 2000 and 2021 (*Evolução Da Produção Mundial de Vinho*, n.d.). This is a major growth when compared to Old World producers such as France or Italy, which have experienced a decrease in wine production of 40.56% and 13.8% between 2000 and 2021, respectively (*Evolução Da Produção Mundial de Vinho*, n.d.). Like most wine producers in the world, the Portuguese wine market is made up mostly of small and medium organizations (Faria et al., 2020). More specifically, micro and small organizations make up 74% and 21% of the market respectively, and medium organizations make up 4% (Faria et al., 2020).

Now that the wine industry has been defined and discussed in further detail, the following chapter of the literature review aims to examine environmental issues in the wine industry and common types of sustainability strategies that wine producers are using to face these issues.

2.2: Sustainability in the Wine Industry: A new challenge in organizational change for wine producers

The second chapter of the literature review will provide an overview about sustainability in the wine industry, whereby the current problems faced at the different stages of wine production will be discussed, as well as current sustainable practices.

2.2.1: Environmental concerns in the wine industry

In the wine industry, there are already many environmental concerns that wine producers are currently facing, at the different stages of wine production. Wine production consists of the following four stages: viticulture processes, the actual production of the wine, distribution and the production of bottles (Neto et al., 2013).

As part of the viticulture processes, the grapes used in the production of wine is one of the agricultural products that will be most affected by a changing climate (Stroud, 2020, 217). Wine grapes are a very sensitive crop, which reacts greatly to temperature changes (Stroud, 2020, 217). According to Stroud (2017), some of the main affects that a changing climate has on the grapes that are grown are the following: “souring, improperly developing tannins, inconsistent acidity levels, sunburnt crops and severe vine damage” (Stroud, 2020, 218). Furthermore, problems such as an increase in pests and plant diseases are also a reality that wine producers are now facing due to rising temperatures (Stroud, 2020, 218). Earlier harvests are also a common issue due to climate change.

Aside from the effect that climate change will have on the grapes, water is also an important issue for wine producers. Water scarcity is becoming increasingly problematic, and Southern Europe is already seeing the effects (Costa et al., 2016). The main causes for water scarcity include less rainfall, increased temperatures and longer-lasting heatwaves, which are all factors leading to droughts (Costa et al., 2016). Furthermore, the exhaustive use of water in agricultural production is also a problem (Costa et al., 2016). Since water is very important in both the viticulture and the production of wine stages, this is another concern for wine producers.

While environmental concerns due to climate change are important for wine producers to consider, it is also important note that there are harmful agricultural practices being used in wine production. In the study conducted by Neto et al. (2013), the different stages of wine production were studied in depth, in order to determine the environmental impact (Neto et al., 2013). The authors found that the viticulture stage had the biggest environmental impact, with over 50% of the total environmental impact being attributed to this stage (Neto et al., 2013). After viticulture, the second most harmful environmental impact comes from the bottling stage, which is then followed by the wine production and distribution stages (Neto et al., 2013). At the viticulture stage, much of the harmful practices come from the use of fertilisers and the use of agricultural machinery in the vineyards (Neto et al., 2013). One limitation from this study is that only the

Vinho Verde region wine has been studied, meaning that the results could differ for other regions or types of wines.

Aside from the use of fertilisers and agricultural machinery in the vineyards, the other main harmful practices used in wine production are the following: “high water consumption [...] energy consumption, the use of non-environmental friendly inputs (bottles and other packaging), and greenhouse gases emissions depending on nitrous oxide emitted in vineyard and nitrogen fertilization” (Luzzani et al., 2021, Merli et al., 2018).

Some wine producers have already begun to try to solve these issues by implementing strategies for sustainability in the different stages of their wine production.

2.2.2: Current sustainability strategies and practices in the wine industry

Environmental concerns and climate change have already forced firms in all kinds of industries to rethink their strategies and practices, in order to incorporate more sustainable practices, and the wine industry is no exception. Sustainable strategies are defined as “a firm’s detailed plan for achieving environmental integrity, social equity and economic prosperity” (Barnett et al., 2021).

In terms of the viticulture processes stage, there are various strategies for sustainable production and adapting to a changing climate. One common strategy is choosing to plant new varieties of grapes, which are more resilient (Stroud, 2020, 220). Changing the farming methods used in the vineyards is also something that wine producers are doing, some switching to organic or biodynamic farming (Stroud, 2020, 222). Organic farming is a type of farming whereby the goal is to create a high-quality agricultural product, while also protecting the environment by strictly limiting harmful agricultural practices, such as the use of pesticides and synthetic fertilizers (MINODORA STOI et al., 2020). Biodynamic farming shares some similarities with organic farming, however apart from removing the use of chemicals from agricultural practices, it also aims to focus on the connection of the crop with the soil and the native ecosystem (Hill, 2022). Aside from the farming methods used, biodiversity management is another important strategy in terms of implementing sustainable viticulture practices (Luzzani et al., 2021).

In the wine production stage, water management is very important when implementing strategies for sustainability (Costa et al., 2016). There are also a variety of strategies for water management, which mostly occur in the cellars (Luzzani et al., 2021). These strategies include

things such as monitoring water consumption, having a water treatment plan and collecting and recycling water that has already been used (Luzzani et al., 2021).

If we consider the implementation of sustainable practices from an organizational change perspective, it is interesting to note that one of the key factors that enables an organization in the wine industry to implement sustainable practices is the commitment and willingness to change of its managers (Fiore et al., 2017). Contrarily, one of the main challenges identified to begin using sustainable strategies in wine production is the lack of clarity of what it means to be sustainable (Golicic, 2022).

While the literature review provided more information about some of the more common strategies for sustainability currently used by wine producers, there is still a lack of studies investigating this topic from an organizational change point of view. More specifically, we do not yet know how wine producers learn about and decide whether or not to adopt these strategies. In order to further investigate this issue, the following research question has been developed:

How do Portuguese wine producers adopt sustainable strategies?

2.3: Translation theory in organizational change

To answer this research question, I propose to use the insights of the translation theory. The translation theory was first discussed by French sociologists in the 1980s, whereby they created the idea that translation is a “complex process of negotiation”, rather than something that is only applied to languages (Waeraas & Nielsen, 2016). The concepts of travelling ideas and translation were introduced in the organizational change field by Czarniawska and Sevón, in their 1996 book entitled “Translating Organizational Change” (Nielsen et al., 2022). The translation theory “focuses on how ideas and practices move across space, and particularly across social and political boundaries” (Lawrence, 2017). It is also important to note that the translation theory does not only examine how and where ideas move, but also how they are transformed when implemented in a different location or organization (Lawrence, 2017).

The translation theory is a theory that has been developed to study organizational change, within an organizational field. An organizational field is described as a field where a group of participants, more commonly referred to as actors, collaborate together to share ideas related to their field of work (Nielsen et al., 2022). These participants can include many different

participants, such as collaborators from government agencies, research institutions and many more (Nielsen et al., 2022). For the purpose of this study, the wine industry will be analyzed as an organizational field.

Another important concept that has been widely studied in the field of organizational change is the “idea carrier” (Morris & Lancaster, 2006). An idea carrier in the translation theory of organizational change is someone who shares knowledge and ideas and can include professionals such as consultants (Morris & Lancaster, 2006).

One limitation when applying the translation theory is that there has been many different research studies and, as such, there are multiple versions and definitions of what the theory is (Waeraas & Nielsen, 2016). Even in the study by Waeraas and Nielsen (2016), which aimed to compare three different categories of translation theories, the authors write that by only including three categories, they have excluded many other works on the subject (Waeraas & Nielsen, 2016,). Having so many different definitions of the translation theory makes it difficult for the researcher to decide which one should be applied.

In the agriculture industry, Laminé (2009) had described how knowledge sharing among farmers is a crucial step in implementing new strategies and technologies, especially when it comes to sustainability (Lamine & Bellon, 2009). In terms of wine, a study similar to this dissertation was identified, which consisted of analyzing how collective learning and socializing enabled wine producers in France to transition to sustainable practices, more specifically to organic or biodynamic farming methods (Montes-Lihn, 2017). This study concluded that:

“The adoption of green practices [...] is far more than a mere technical affair. It implies complex social mechanisms, which include collective learning and a socialization process that transcend the technical specifications of organic farming.”

(Montes-Lihn, 2017, 425).

One limitation of this study is that it was set in the winemaking region of Burgundy, in France, meaning that experiences of other wine producers of other regions or countries may differ from the results obtained.

In this dissertation, the translation theory of organizational change and the travelling of ideas concepts will be applied in order to understand how ideas and knowledge sharing in the wine industry travel across geographic, political, and social boundaries, and how wine producers choose and implement their strategies for sustainability.

3. Methodology

This chapter will explain how I selected the methodology used for this study, as well as how I conducted the research.

3.1: Research Design

To answer the research question, a qualitative research approach was selected. It was a relevant choice for different reasons. Since strategies for sustainability in the Portuguese wine industry has not been widely explored in the field of management, a qualitative approach would provide rich information that could help further develop research on this topic (Graebner et al., 2012).

Once it had been decided to use a qualitative research approach, I then chose to conduct a multiple case study. Since the wine industry is largely fragmented, and the majority of wine producers are small organizations, each with their own methods of wine production, studying multiple cases would allow me to examine the processes in different environments (Stake, 2006). A multiple case study approach allowed me to gain a deeper understanding of whether the process of implementing strategies for sustainability in wine production differed greatly between organizations.

In order to select organizations to contact in the initial search phase, I first began to research different sustainable strategies commonly used by wine producers, to better define the types of producers that I wanted to include. Based on the results from my research, I decided that producers that used organic, regenerative, or biodynamic methods of farming would be considered. Since I wanted to study strategies for not only the viticulture process, but also the other stages in wine production, I tried to find wine producers that also had strategies for sustainability in their production, bottling and distribution stages.

Next, I began to search for wine producers that met the criteria established. Initially, I had identified ten potential case studies and had contacted all of them by email. Out of these ten organizations, I received one answer from the Wines of Alentejo, where I had the opportunity to interview the sustainability programme coordinator, João Barroso. After struggling in the initial search phase for wine producers, I was fortunate to learn of a wine conference, “Essência do Vinho, Lisboa”, a national wine conference hosted by the Portuguese wine magazine “Revista de

Vinhos”, which I attended in order to learn more about the wine industry in general, as well as speak with wine producers. This response from the Wines of Alentejo, along with my attending of the national wine conference in Lisbon, were both key factors in advancing my research process and helping me find case studies. Through the Wines of Alentejo and the “Essência do Vinho, Lisboa” conference, I made the connections that would lead me to my three case studies, which are Cortes de Cima, Esporão and Coelheiros. All three of these wine producers met the criteria that I had established prior.

3.2: Data Collection

For the data collection process, both primary and secondary sources were collected. In terms of primary data, two types of sources were used: semi-structured interviews and direct observations (Tables 1-4). Both sources allowed me to gather rich and detailed data about the strategies that the four aforementioned case studies use, and, as previously mentioned, without having any constraints on the data collected. The main secondary sources that were used for the purpose of this research included each organization’s websites (except for Cortes de Cima, which is in the process of being re-structured), podcasts and blog posts (Tables 1-4).

The data obtained from the interviews and direct observations was collected between October 2022 and December 2022. In total, I conducted eight semi-structured interviews and two direct observations across the four organizations (Tables 1-3). I also conducted two interviews with industry experts, one with João Barroso, of the Wines of Alentejo, and one with Antonio Graça, of Sogrape (Table 4). All interviews lasted between 45 minutes and 120 minutes. The main themes that were explored during these interviews included each organization’s background, the strategies for sustainability that they have implemented in the different stages of their wine production, how they made the decision to use those specific strategies, which resources or tools were used to implement the strategies and how these changes have affected the organization in terms of management. Also, on a more general scale, another theme that was explored in most interviews was the challenges that the wine industry is facing due to a changing climate.

At Cortes de Cima, a total of five individual interviews were conducted, all of which occurred in-person (Table 1: 1.1). The first person interviewed from Cortes de Cima was Anna Jorgensen, the owner and general manager of the organization. The other three interviewees, as

well as their roles at Cortes de Cima, were: Sandra Coelho, viticulture manager, Aurélien Jean, resident winemaker, and Mónica Tereno, assistant winemaker and marketing and sales manager. The fifth interview that is considered for this case study was with Igor Beron, co-founder of Temple Wines, a wine distribution company that works with Cortes de Cima. I also conducted one direct observation, where I went onsite to Cortes de Cima and visited their farm, their cellars, and the estate in general (Table 1: 1.1).

At Esporão, two individual interviews were conducted (Table 2: 2.1). The people interviewed were José Luis, who is the chief production officer for the organization and Ana Cruz, who works as an enologist. A direct observation was conducted at the Herdade de Esporão, in the Alentejo region, where I visited their estate, vineyards and cellars (Table 2: 2.2).

For my third case study, Coelheiros, a total of one individual interview was conducted (Table 3: 3.1). The person interviewed was João Raposeira, the agricultural manager at Coelheiros. A direct observation was also conducted at the Herdade de Coelheiros, where I went onsite and visited their estate, vineyards, and cellars (Table 3: 3.1).

Aside from the three case studies, I also collected data through a field study, which consisted of attending the wine conference “Essência do Vinho, Lisboa”. During this event, I had the opportunity to learn about the wine industry by speaking with various Portuguese wine producers from all over the country and listening to multiple presentations. Although attending the event itself did not provide me with in-depth information regarding sustainable strategies in the wine industry, it did provide me with some more general information about the subject as well as some valuable connections which allowed me to further advance my research process.

Table 1: Data Sources – Cortes de Cima*1.1: Primary Data Sources*

Case	Type of Data	Name of Interviewee	Name of organization	Position in organization	Date of interview	Length of interview
Cortes de Cima	Qualitative: Interview	Anna Jorgensen	Cortes de Cima	General Manager	29-10-2022	100 minutes
Cortes de Cima	Qualitative: Interview	Igor Beron	Temple Wines	Co-founder	29-10-2022	100 minutes
Cortes de Cima	Qualitative: Interview	Sandra Coelho	Cortes de Cima	Viticulture Manager	30-11-2022	60 minutes
Cortes de Cima	Qualitative: Interview	Aurélien Juan	Cortes de Cima	Resident Winemaker	30-11-2022	30 minutes
Cortes de Cima	Qualitative: Interview	Mónica Tereno	Cortes de Cima	Marketing & Sales, Winemaker	30-11-2022	60 minutes
Cortes de Cima	Qualitative: Direct observation	-	Cortes de Cima	-	30-11-2022	180 minutes

Source: The author

1.2: Secondary Data Sources

Case	Type of Data	Title of the Document	Name of the Author	Name of his organization	Date of publication
Cortes de Cima	Podcast	Unconventional, Yet Traditionally Portuguese	Dylan Herholdt	Portugal, the Simple Life	04-12-2021

Source: The author

Table 2: Data Sources – Esporão*2.1: Primary Data Sources*

Case	Type of Data	Name of Interviewee	Name of organization	Position in organization	Date of interview	Length of interview
Esporão	Qualitative: Interview	José Luis	Esporão	Chief Production Officer	10-11-2022	45 minutes
Esporão	Qualitative: Interview	Ana Cruz	Esporão	Enologist	15-12-2022	90 minutes
Esporão	Qualitative: Direct Observation	-	Esporão	-	15-12-2022	90 minutes

Source: The author

2.2: Secondary Data Sources

Case	Type of Data	Title of the Document	Name of the Author	Name of his organization	Date of publication
Esporão	Website	Esporão (Company Website)	-	Esporão	-
Esporão	Podcast	João Roquette, Herdade do Esporão, Leaders in Sustainability in Alentejo wine production	Nick Breeze	Secret Sommelier	28-10-2022
Esporão	Page on Website	Herdade do Esporão	-	Robert Parker	2022

Source: The author

Table 3: Data Sources – Coelheiros*3.1: Primary Data Sources*

Case	Type of Data	Name of Interviewee	Name of organization	Position in organization	Date of interview	Length of interview
Coelheiros	Qualitative: Interview	João Raposeira	Coelheiros	Agricultural Manager	18-11-2022	100 minutes
Coelheiros	Qualitative: Direct observation	-	Coelheiros	-	18-11-2022	120 minutes

Source: The author

3.2: Secondary Data Sources

Case	Type of Data	Title of the Document	Name of the Author	Name of his organization	Date of publication
Coelheiros	Website	Coelheiros (Company Website)	-	Coelheiros	-
Coelheiros	Podcast	Luis Patrão at Herdade de Coelheiros Alentejo - Regenerative, Resilient, Balanced	Nick Breeze	Secret Sommelier	28-10-2022
Coelheiros	Website	Wines of Alentejo – Certified Members	-	Wines of Alentejo	-
Coelheiros	Website	Alentejo Wine Region: Progressive, sustainable, radical	Kathleen Wilcox	Paste Magazine	29-11-2022

Source: The author

Table 4: Data Sources – Industry Experts

4.1: Primary Data Sources

Type of Data	Name of Interviewee	Name of organization	Position in organization	Date of interview	Length of interview
Qualitative: Interview	João Barroso	Wines of Alentejo	Sustainability Programme Coordinator	18-10-2022	60 minutes
Qualitative: Interview	Antonio Graça	Sogrape	Sustainability Manager	14-11-2022	60 minutes

Source: The author

4.2: Secondary Data Sources

Type of Data	Title of the Document	Name of the Author	Name of his organization	Date of event
Field Study: Conference	Essencia do Vinho - Lisboa	-	Revista do Vinho	22-10-2022

Source: The author

3.3: Data Analysis

Once the data had been collected, the next step was to analyze it. In order to do so, I used a data coding method, whereby I selected the codes and categories based on the data collected from the review of relevant literature as well as from the data collected through the interviews and direct observations. Furthermore, key words from the research question served as references in creating codes.

I began by referring to my research question in order to decide the different categories. The main code that came from the research question was “sustainable strategies”, which was a very broad starting point. To be more specific, referring to the review of literature, I created four sub-categories within this code, which consisted of the different stages of wine production (viticulture processes, actual production of wine, distribution, and bottling). After dividing the sustainable strategies code into the four stages of wine production, it was now possible to place each of the strategies from the data collection under one of these coding labels. An example of

this is under the sustainable strategies in viticulture processes, topics such as biodynamic, regenerative, animals in the vineyards and cover crops were included. Since the goal of this research was not simply to highlight the strategies the wine producers are using, but rather how they came to use those strategies, by referring to the translation theory, I also created codes to reflect this. The full coding process can be seen in the appendices section (Appendix 1).

4. Empirical Setting

As mentioned in the methodology section, the three cases that were studied for this research were the following: Cortes de Cima, Esporão and Coelheiros. In this chapter, a general overview of each individual case will be presented, as well as the current strategies for sustainability of each organization.

4.1: Cortes de Cima

4.1.1: Overview of the organization

The first organization that will be presented in this study is Cortes de Cima, a wine producer situated in the Alentejo region of Portugal. In 1988, Danish-American couple Hans and Carrie Jorgensen purchased the property of Cortes de Cima after deciding to settle in Portugal (Herholdt, n.d.). The property was already being used to farm cereals, which is what the couple continued to farm upon acquiring the property (Herholdt, n.d.). They experimented with the production of other crops, such as melons and tomatoes, until finally planting their first vineyards in 1991 (Herholdt, n.d.). The first harvest of grapes took place in 1996 (Herholdt, n.d.). Cortes de Cima has a unique and interesting story of how their first wine product, Incógnito, came to be. At the time that Hans and Carrie began planting their vineyards, it was illegal to plant non-native grapes in the region (Herholdt, n.d.). That however did not stop the couple from planting and harvesting Syrah grapes to produce their first wine. The fact that the grapes being used to make the wine were “illegal” at the time led them to naming their wine Incógnito, for which the grape variety was not disclosed (Herholdt, n.d.).

Up until 2019, Cortes de Cima was operating the standard intensive agriculture farm. The farm operated as a monoculture, producing one main “cash crop”; in this case, the grapes that would be used in the production of their wines. As a standard agriculture farm, Cortes de Cima originally operated with 240 hectares of land, some of which was owned and some of which was rented.

Cortes de Cima currently offers nine different wine products, as well as one olive oil product. Their wine product offerings can be divided into two categories: their main products, which are products that are offered every year and their “wildcard” products, which can be different each year and where the numbers of products offered are limited. They have five main

products, which are offered continuously, and include Chaminé offered in both white and red, Cortes de Cima, offered in both white and red, and Incógnito, a red wine. In terms of their “wildcard” products, they currently offer four additional wine products: Lour-inho, Daqui, Uma and Palhete.

4.1.2: Cortes de Cima’s strategies for sustainable wine production

As previously mentioned, it was in 2019, when daughter of Hans and Carrie Jorgensen, Anna, became the general manager, that Cortes de Cima decided to change their agricultural methods of production and become a fully organic vineyard. In order to do so, they began by reducing their area of operations, going from 240 hectares to 125 hectares. They also no longer rent any land, so that they are able to maintain full control of the agricultural processes and ensure that all production remains completely organic. After reducing their area of operations and cutting down their production, Cortes de Cima focused on regenerating their land, with an emphasis on creating ecosystems in their vineyards and allowing the natural biodiversity to flourish. As such, they are working with a biodynamic farming approach. Some of the key biodynamic farming methods to highlight are allowing native plant species and weeds to grow, using animals in the vineyards and using cover crops to ensure healthy soils. They no longer use any synthetic chemicals in the vineyard and are focused on the health of their soils, since their belief is that the “soil is their most valuable asset,” (Interview with Anna Jorgensen, of Cortes de Cima). Grapes are handpicked, and Cortes de Cima avoids using tractors and tilling in their vineyards.

Furthermore, in the wine production stage, Cortes de Cima is focused on water and energy management. They keep track of all the water used in the processes of winemaking, the cleaning of barrels and the cleaning of the cellars. Another way that Cortes de Cima manages their water is by using a pressure gun on the hoses, so that water can be turned on and off during its use, rather than simply being left on while walking around. In terms of energy management, they have several strategies. One interesting strategy to mention is that during the harvest period, they pick their grapes during the night, since the grapes will be fresh and cool and will therefore not need to be cooled when they arrive to be processed.

In terms of social sustainability, for Cortes de Cima, it is very important to have a regular staff and provide them with good working conditions. When they employ people, they have the

goal of keeping them and providing them with work for the whole year. They take the time to teach and train their employees about their wine production processes. This is different than the industry and regional norm, where it is usual to employ people by short-term contracts, especially during the harvest season, and where they are not provided with training and optimal work conditions.

Cortes de Cima is currently applying to receive the European Union organic certification for their new, organically-produced wines, which will be released to the market next year.

4.2: Esporão

4.2.1: Overview of the organization

The second organization that will be presented is Esporão, a Portuguese wine producer that operates across multiple regions in Portugal, with the main business located in the Alentejo region. Esporão is a family business that was founded in 1973, when José Roquette, along with Joaquim Bandeira, purchased the historical Herdade do Esporão (*Herdade Do Esporão - 750 Years of History*, 2017). The Herdade do Esporão has a rich history, dating back to the year 1267 and consists of the Esporão Tower, the Esporão arch and the Nossa Senhora dos Remédios chapel (*Herdade Do Esporão - 750 Years of History*, 2017). As a wine producer, Esporão's first harvest occurred in 1985, which launched its first wine (*Herdade Do Esporão - 750 Years of History*, 2017). The company continued its growth by acquiring two more properties, the Quinta do Ameal, in the Vinho Verde region and the Quinta dos Murças, in the Douro region (*Herdade Do Esporão - 750 Years of History*, 2017). Esporão continues to remain a family business, currently still owned by the Roquette family.

As previously mentioned, the company's main operations come from the Alentejo region, currently operating with 2000 hectares of land, with about 600 hectares of vineyards. On the estate, they also produce olives as well as some other crops. Esporão employs over 300 people across Portugal.

Esporão's product offerings can be divided into three main categories: wine, olive oils and beer (*Esporão (Homepage)*, n.d.). In the wine category, Esporão currently offers over 40 products, coming from all the regions where they produce wine in Portugal (*Products (Wines)*, n.d.). The wines offered include red wines, white wines, rosés and port wine (*Products (Wines)*,

n.d.). They export much of their products to all over the world, with over 40% being exported to Brazil and the United States, their largest markets.

4.2.2: Esporão's strategies for sustainable wine production

Esporão's mission statement, which translates from Portuguese to English as "to produce the best products that nature allows us, in a responsible and inspirational way," (*Who We Are*, 2015), really reflects the core goals and activities of the company. In 2007, Esporão started making the conversion to organic farming, a process which took 12 years to convert all hectares of vineyards to be organic (Breeze, n.d.-a). It has since then grown to become one of the largest organic wine producers in Europe. All their vineyards in the Alentejo and Douro are certified as organic. The Quinta do Ameal, in the Vinho Verde region, is the only vineyard that is not certified organic and that is because it is very difficult to produce organically in this region. Aside from eliminating the use of synthetic chemicals in the vineyards, Esporão has implemented many other strategies for sustainable practices in their vineyards. This includes allowing animals such as sheep to free graze, building bat shelters, and using mulching to protect the soils (*Agricultural Practices*, 2022).

In the other wine production stages, Esporão has also implemented strategies for sustainability. In the actual production of wine stage, the organization ensures an efficient use of water, by setting water limits and measuring the amount of water being used. Moreover, Esporão's wine cellars were built underground, using the same tools that were used to build the Lisbon metro, which allows them to remain cool without the use of any cooling equipment or energy. Their wine production buildings were also made out of the traditional, local clay and they have concrete fermentation barrels which allows them to maintain cool temperatures without the use of energy.

At the Herdade do Esporão, there is also an onsite restaurant for visitors. Even at this restaurant, which has been awarded a Michelin Green Star, it is evident that the organization brings their mission to life. They have their own vegetable gardens and a hen house, from which the food produced is the food used directly in the kitchen for the restaurant.

In terms of social sustainability, Esporão places a high importance on having a regular staff and trying to give people the best working conditions. Some of the initiatives for employees provided by the company include, but are not limited to, providing transportation to and from

work, hot lunches for all employees and health insurance (*Herdade Do Esporão*, n.d.).

Furthermore, onsite housing is available for employees who do not live close to the estate.

In 2022, the Herdade do Esporão was awarded with the Robert Parker Green Emblem, a prestigious recognition that is awarded only to organizations that are considered leaders and pioneers of sustainability in the wine industry (*Esporão Awarded the Robert Parker Green Emblem*, 2022).

4.3: Coelheiros

4.3.1: Overview of the organization

The third organization presented for this study is Coelheiros, a Portuguese wine producer from the Alentejo region. The Herdade de Coelheiros, the estate on which the winery is located, has a rich history, with the first historical reference of the property being in 1467 (*History*, n.d.). Over the years, the estate had many different owners and was used for many different farming purposes, which included products such as cork and cereals (*History*, n.d.). As a wine producer, Coelheiros was founded in 1981, when it was purchased by Joaquim and Leonilde Silveira (*History*, n.d.). In 1991, Coelheiros produced their first wine, which was a red wine, and continued to develop a variety of wines over the years (*History*, n.d.). By 2015, the Herdade de Coelheiros property was acquired by new owners, Alberto Weisser and Gabriela Mascioli, which was also the point at which Coelheiros started to shift their wine production to be produced more sustainably (*History*, n.d.).

Based in the Alentejo region, more specifically in the municipality of Arraiolos, the Herdade de Coelheiros consists of 800 hectares of land, with 50 hectares of the land being used for vineyards (*The Estate*, n.d.). The remainder of the property is divided into a walnut orchard, an olive grove and a 600 hectare cork forest, where animals such as sheep can graze (*The Estate*, n.d.). It is interesting to note that the estate has never operated as a monoculture farm, which was a key factor in helping Coelheiros transition to using more sustainable strategies in their vineyards.

In terms of Coelheiros' product offerings, a variety of wines are offered. In the product category of red wines, Coelheiros offers four main products: the Coelheiros red, the Tapada de Coelheiros red, the Tapada de Coelheiros Garrafeira and the Coelheiros Vinha do Taco, which is

a limited product offering depending on the conditions of growth of the year (*Our Wines*, n.d.). In the white wine product category, Coelheiros two main products: the Coelheiros white and the Tapada de Coelheiros white (*Our Wines*, n.d.). They are also currently offering a Coelheiros Chardonnay, which is the last of this wine available, since they will no longer be producing it (*Our Wines*, n.d.). Lastly, Coelheiros also produces their own rosé wine (*Our Wines*, n.d.).

4.3.2: Coelheiros' strategies for sustainable wine production

As previously mentioned, it was in 2015 when the Herdade de Coelheiros was acquired by Alberto Weisser and Gabriela Mascioli that Coelheiros began to implement strategies for sustainable wine production. In 2016, Coelheiros decided to join the Wines of Alentejo Sustainability Programme (WASP), in order to help plan for and achieve their goals for sustainability, and in 2017 they began to convert their viticulture farming methods to organic (Breeze, n.d.-b). They practice different types of viticulture, some of which also include biodynamic methods. Their main goal in ensuring sustainable use of the land is to create an equilibrium and harmony with their natural ecosystems, by implementing strategies such as allowing native plant species to flourish, providing shelters for bats and birds, which in turn provide a natural solution for pests in the vineyards, using animals in the vineyards and using cover crops to ensure healthy soils. As previously mentioned, Coelheiros never operated as a monoculture farm, which helped facilitate the changes they made in promoting biodiversity.

In terms of the other stages of wine production, Coelheiros has also implemented some strategies for sustainability. Water management is an important part of Coelheiros' wine production sustainability plan (*Sustainability*, n.d.). To monitor water usage, the organization has implemented the following strategies: installation of water meters to monitor consumption, the use of pressure water guns on hoses and training for employees on water management (*Sustainability*, n.d.).

Coelheiros is one of the eleven certified members of the Wines of Alentejo Sustainability Programme (WASP). All of the vines have been certified organic and, next year they will launch their first organic wines.

5. Findings

In this chapter, the main findings from the data collected from both the primary and secondary sources will be presented, with the goal of answering the research question. To recall, the goal of this study is to answer the following research question:

How do Portuguese wine producers adopt sustainable strategies?

This chapter will therefore analyze the results obtained from each case study and, more specifically, the key factors which enabled and supported them in implementing their various strategies for sustainable wine production.

5.1: Willing to adapt

This may seem like an obvious answer for any type of organization thinking about implementing these types of strategies into their business models, however this has been an imperative starting point for all the case studies in question. Realizing that they have no choice but to implement sustainable practices in order to survive as a wine producer and organization into the future was a key factor in the decision to make the transition for all of these wine producers.

While many wine producers are still hesitant to make changes and adopt more sustainable practices, all interviewees agreed that there is no other option. According to João Barroso, of the Wines of Alentejo, the soils are dead, water is increasingly scarce and the methods of agriculture that have become the standard will no longer be viable. Many wine producers have a very short-term way of thinking, which is focusing only on current profit and not thinking ahead in the future.

At Cortes de Cima, Anna Jorgensen, the general manager, made the decision to make many changes to their business model, in order to adapt to a changing environment. As previously mentioned, Cortes de Cima reduced the land on which they operate, they stopped renting land and are now in the process of building a closed ecosystem, by using a biodynamic farming approach. In her interview, Anna stated that realizing that she needs to make these changes in order to survive as an organization in the long-term was one of the reasons she

decided to implement these strategies. She believes that it is important to make sacrifices now, in order to continue to operate in the future. Furthermore, she believes that adopting these new strategies will result in Cortes de Cima making higher quality products and will help them grow as an organization.

When João Roquette started to work at Esporão in 2005, he noticed a few challenges that needed to be addressed. The agricultural specialists, who had been working there for a while, felt that Esporão needed to adapt their agricultural processes.

Regarding this, João Roquette states that:

“I was seeing a lot of answers to the challenges, and also a passion inside, a will to do things in a different way, on the agriculture side.”

(Interview with João Roquette of Esporão, by Breeze, N, of Secret Sommelier).

It can therefore be seen that, prior to starting to make the transition at Esporão, the willingness of both the manager and the employees to make a change and so something different was critical for the organization to adapt their business model.

Although Coelheiros was always an estate with a variety of crops and plant species, and did not operate as a monoculture farm previously, the previous proprietors did not necessarily have a focus on sustainability in the vineyards. It was with the change in management in 2015 that sustainability became one of the main goals of the organization, highlighting how important the motivation of the managers is in successfully adopting sustainable strategies.

It is important for wine producers to realize that many changes will need to be made in order for them to be able to produce sustainably, and they need to be willing to accept these changes. This was an important first step for the three case studies in adapting their business strategies.

5.2: Collaboration: How idea carriers can help achieve organizational change

The three case studies of this study worked with collaborators from outside of the organization, in order to help them achieve their sustainability goals. In this section of the findings chapter, some of the different types of collaborators which helped the case studies make the transition will be presented.

5.2.1: Collaborating with idea carriers to achieve sustainability goals

When an organization decides to change their entire business model and methods of production, it often requires working with many professionals. The organizations in this study all worked with a variety of people. When Cortes de Cima decided to make the transition, they worked with specialists such as biodiversity consultants. They also referred to examples of organizations that had made the transition before.

In her interview, Anna Jorgensen stated the following:

“I think having knowledge, having someone who’s done it before, who can help you, walk you through it and give you guidance and tell you if you are going the right way or not. Definitely for me that was very important.”

(Interview with Anna Jorgensen of Cortes de Cima, October 29, 2022)

Based on this, it can be stated that for Anna, the guidance she received from reaching out to specialists was very valued and helped her lead Cortes de Cima in making the changes.

Esporão also worked with many people when they initially decided to implement sustainability in their strategy. They visited other wine producers that were already producing organically and they began attending conferences and speaking with specialists in order to educate themselves on the subject (Breeze, n.d.-a).

When Coelheiros wanted to make the transition and implement strategies for sustainability in their business model, they worked with the Wines of Alentejo Sustainability Programme, a knowledge sharing programme that assists wine growers to achieve their sustainability goals. This will be discussed further in the following section.

Travelling also appears to have been an important method of learning and sharing ideas, where the interviewees from the three organizations all either had international work experience or had visited abroad to learn more. Cortes de Cima’s Anna Jorgensen had a lot of experience working in vineyards all over the world, in countries such as Australia, New Zealand and the United States. At Esporão, João Roquette also travelled extensively to learn more about organic and biodynamic production (Breeze, n.d.-a). He travelled to places such as Chile and California, which allowed him to gain a better understanding of the subject. From Coelheiros, João Raposeira, the agricultural manager, also had international agricultural work experience, having worked in countries such as Chile and Morocco. Furthermore, travelling was a key factor in the

creation of the knowledge sharing platform, the Wines of Alentejo Sustainability Programme (WASP), whereby the programme was elaborated by following models of existing sustainability programs in places such as California or Chile. Based on these experiences, we can see that travelling was an important factor which led to the sharing of ideas on a global scale. Some of these ideas were brought back to Portugal and implemented in order to help these organizations achieve their sustainability goals.

5.2.2: Challenges in collaboration

While collaborating with a variety of professionals and organizations from all over the world, as well as internally with their own staff have been key factors enabling the three case studies to adapt their business models to producing wine sustainably, there have also been some challenges in this area.

Although it is a great initiative to make the transition to sustainable strategies, many wine producers expressed their concern of whether consumers will still be willing to purchase their products once they have made the transition, and this is where the participation and collaboration of consumers in the process becomes important. All case studies, as well as industry experts agreed that there is a lack of consumer knowledge of how wine is produced, especially in terms of sustainability. According to industry expert, Antonio Graça, wine consumers currently face an overload of information and certifications regarding sustainably produced wines, which has created a lot of confusion.

João Roquette, of Esporão, stated the following regarding the communication of sustainable practices to consumers:

“Everybody has a sustainability claim and the consumer is getting to the point, where it’s kind of like, looking at it and saying, hold on, if everyone is sustainable, maybe nobody is sustainable. So, we need to be careful with what exactly we are claiming to be. We need to stop speaking about sustainability and start speaking about actually what we are doing.”

(Interview with João Roquette of Esporão, by Breeze, N, of Secret Sommelier).

While a sustainability label and certification can potentially provide a wine producer with a competitive advantage, there are some that are less reliable or less true than others. There is a lot of greenwashing in the market. Furthermore, many of the interviewees from the case studies

described that there is a large number of consumers who perceive organic or biodynamic wines as being of lower quality. In his interview, Antonio Graça stated that it is not enough to produce sustainably, but it is imperative to also teach consumers to be responsible with their purchase decisions. By teaching consumers more about how the wines that they purchase are made, consumers will be able to make a well-informed decision when selecting the wines that they will buy.

Once the transition to sustainable practices has been done, you will need to find consumers who are willing to pay for your product, which is not always easy. In her interview, Mónica Tereno, of Cortes de Cima, described how modifying their business model has had an impact on their consumers so far. The changes that they have made to their business model has allowed them to retain some consumers, to lose some consumers but also to attract a new market of consumers.

All interviewees from all case studies agree that the best way to enhance consumer knowledge about their sustainable wine products is to educate them by having them visit their estates, where they can directly observe how the wine that they consume is produced.

Another challenge faced by some of these wine producers is the lack of existing government agencies in Portugal to support wine producers in making the transition to sustainable strategies. Although it was not a factor that held them back from implementing sustainability strategies, João Raposeira of Coelheiros mentioned that Portugal does not have a government agency for organic or regenerative agriculture, whereas, for example, the Spanish government does. This is another challenge in terms of collaboration that wine producers, or agricultural producers in general, may face when trying to make the transition, as there is a lack of clear guidelines and regulations for implementing these strategies. This may lead to a lot of uncertainty for producers who are interested in pursuing organic or regenerative farming methods, which can be a demotivating factor for implementing these strategies.

5.3: Collective knowledge and information sharing programs

In this section, the importance of knowledge and information sharing programs as a tool in making the transition to sustainable practices in wine production will be discussed. In the empirical setting chapter, in the section of Coelheiros, it had been mentioned that they were certified members of the Wines of Alentejo Sustainability Programme (WASP). The WASP

programme is one of the most advanced sustainability programmes in the wine industry in Europe and has helped many wine producers begin implementing better practices in their business models by offering many different types of support.

As previously mentioned, Coelheiros adopted WASP in 2016, in order to help them achieve their sustainability goals. The programme provided them with the necessary key indicators for sustainability in all the stages of wine production (Breeze, n.d.-b). The WASP programme was created in 2014, with the goal of assisting producers of the region in adopting more sustainable practices.

According to the Sustainability Programme Coordinator, João Barroso, the two key factors which led WASP to be successful was that the programme is free and voluntary. As a knowledge sharing platform, the programme provides a variety of trainings and tools for wine producers to implement strategies for sustainability in the vineyard. This includes, but is not limited to, consulting, trainings and workshops on subjects ranging from viticulture to marketing, and field trips to wine estates that already adopted sustainable practices.

The sustainability certification is not obtained easily either; by using a points system on a scale of 0-4, wine producers need to obtain a score of 3.5 across 171 criteria in order to become certified members (Appendix 2). Furthermore, it is also important to note that to ensure the members' commitments to and interests in the programme, WASP waited for six years after creating the programme to launch the certification. Out of 600 members, there are currently only 11 that have received the sustainability certification, Coelheiros being one of them.

Coelheiros' lead enologist, Luis Patrão, made the following comment about WASP:

“Wines of Alentejo and the sustainability programme, they were a key player for us. They help us so much because they gave us key indicators, KPIs, in terms of sustainability [...] So, I think Vinhos do Alentejo, the sustainable programme is very important because it's an excellent platform to share ideas and help us advance in terms of sustainability.”

(Interview with Luis Patrão, of Coelheiros, by Nick Breeze of Secret Sommelier).

According to João Barroso, as well as many other industry experts spoken to, the Alentejo region has greatly changed since the implementation of the WASP programme. He states:

“In Alentejo, we have definitely changed the landscape for the better, I can assure you through data, that the way you make wine in the Alentejo today has nothing to do with the

way that you would make it seven years ago, before WASP. ”

(Interview with João Barroso of Wines of Alentejo, October 18, 2022).

At the end of 2014, WASP had 90 members and now, as of 2022, there are 600 members.

It is important to note that at the time that Esporão began to implement a more sustainable business model, the WASP programme did not yet exist. Since they were a pioneer in sustainability in the Portuguese wine industry, Esporão did have a part in helping make the WASP programme a reality (Breeze, n.d.-a). Furthermore, they are currently one of the wine producers that WASP brings other producers to visit as a field trip, allowing them to serve as an example in the industry and participate in this knowledge sharing platform.

5.4: Collective learning through social sustainability strategies to achieve sustainability goals

Another main finding that has helped all case studies be successful in updating their business models was how they implemented the social aspect of sustainability. This section will therefore present two common key factors of social sustainability that helped the organizations achieve their goals: the first is keeping a regular staff and the second is by supporting the local community.

5.4.1: Having a regular staff

In this section, the importance of having a regular staff who also believes in and supports the mission of the organization will be discussed. All of the case studies emphasized that one of their main priorities were to have a regular staff and offer them employment year-round, rather than the usual contractual employment that is offered. While this is a goal for the social aspect of their sustainability plans, it is in turn something which has helped them and continues to help them reach their sustainability goals.

For Cortes de Cima, having a regular staff has been a key factor in helping them achieve their goals for sustainability. Their goal is to keep their employees and to work with people they know are committed to the mission and making quality products sustainably.

In her interview Mónica Tereno made the following statement regarding keeping the same staff:

“It’s very important because if you work with the same people all year, you can teach them new techniques and the work we are doing in our vineyard is only possible because we have this very strong team.”

(Interview with Monice Tereno, of Cortes de Cima, November 30, 2022).

Esporão and Coelheiros have also placed a high importance of having regular employees, which has also been important in ensuring a smooth transition to implementing new strategies and also maintaining them once the change has been made.

All of the case studies in question provide specialized trainings for their employees, which helps them better understand the mission and goals of the organization in terms of sustainability. These collective learning and training processes are very important in ensuring that employees understand and are motivated to work towards the organization’s sustainability goals.

5.4.2: Supporting the local community

Another important factor to mention is that all case studies make it a point to work with and support local industries as much as possible, which in turn has also helped them reach their sustainability goals. This is another example of how these organizations implement social sustainability in their business model, which in turn helps them make their wine production operations more sustainable.

At Cortes de Cima, Mónica Tereno described that one of their main goals is to support the Portuguese and local economies. Anything that needs to be bought from external producers, they look into the origins of the product. An example that was provided is that the clothing that is bought for their staff is bought from Portuguese producers.

For Esporão, much of their facilities were constructed by local workers, which was constructed by innovatively thinking about how the facilities themselves can be more sustainable.

Ana Cruz, of Esporão, stated the following in her interview:

“In the adega, in architectural ways is the example of sustainability [...] And the walls [of the cellar] are made from clay in an industry not far from here, very typical. You can see they are very thick and can maintain the cold inside, without using energy.”

(Interview with Ana Cruz, of Esporão, December 15, 2022).

This quote demonstrates how supporting the local industries and implementing some of the traditional ways of doing things have allowed Esporão to reach both their social sustainability goals as well as their environmental sustainability goals. This can also be seen throughout the Herdade do Esporão estate, such as the decorative carpets in the buildings, which are traditional and made by local producers.

Coelheiros has also placed an importance on locally sourced products. One example of this is that for the design of their bottles, they have taken the traditional local art of the Arraiolos municipality and turned it into their labels for their bottles.

To summarize this section, the social sustainability goals of these organizations has played a role in helping them achieve their environmental goals. Having regular employees and by supporting the local industries,

6. Discussion

In this chapter, the main findings will be compared to the results obtained in the literature review. In the main findings chapter, instead of presenting the strategies that the organizations have implemented, the findings that were presented highlighted *how* these organizations learned about the strategies and how they came to choose those strategies. There were many interesting factors which allowed for the transfer of information between industry experts and organizations.

One of the findings from the literature review, specifically from Golicic (2022), stated that one of the main factors which led to the successful implementation of sustainable winemaking practices was the commitment of the managers. This aligns with one of the main findings, which is that all the case studies had managers that were committed to their sustainability goals. For all these organizations, their belief in what they are doing and what they are trying to achieve has led to them successfully introducing sustainability into their business models.

In the literature review chapter, the theory of translation of organizational change was introduced. As previously mentioned, the translation of organizational change examines how ideas travel across social and political boundaries and how they are transformed along the way. In this study, we examined how ideas travelled and were implemented for the case studies in question. For the purpose of this study, the wine industry had been labelled as an organizational field.

One of the ideas discussed in the section of the translation theory was regarding “idea carriers”, which were people who enabled and facilitated the transfer of knowledge and ideas. The examples provided included people or organizations such as consultants or business schools. In the findings chapter, the second section highlighted the importance of the collaboration between a variety of people, across both social and political boundaries, in enabling the case studies to implement sustainability strategies. From the results obtained, we can see that all three of the case studies referred to “idea carriers” to learn about and determine which strategies to use. Some of these examples included the use of consultants, knowledge sharing programs and following examples of organizations that had already made the changes.

Another interesting comparison that can be made with the literature review chapter is with the results obtained by Laminé (2009), whereby it had been determined that agricultural producers relied on information and idea sharing to improve their agricultural practices, especially for implementing sustainability strategies. This aligns with the results obtained from the interviews and direct observations. The three case studies had all referred to examples of best practices in the industry in order to be able to implement their own strategies for sustainability. The Wines of Alentejo Sustainability Programme (WASP) is an example of a knowledge sharing program which facilitates the sharing of best practices and information regarding sustainability among wine producers.

An interesting finding which had not been discussed in the literature review chapter was that of social sustainability strategies and their role in helping the organizations achieve their environmental sustainability goals. Montes-Lihn (2017) described, however, that collective learning and socialization were very important factors in implementing sustainable strategies into the agricultural and wine sectors. Based on the fact that all organizations have a regular staff, for which they provide regular specialized trainings on the practices they have implemented, we can conclude that collective learning within the organization has been important in achieving the organization's sustainability goals. Furthermore, another example of collective learning and socialization could be how all organizations work with local industries to help them achieve their sustainability goals, learning from and helping each other.

7. Conclusion

7.1: Summary

The goal of this study was to discover how Portuguese wine producers could effectively introduce sustainable strategies into their business models. By applying the concept of the translation theory of organizational change, we are able to see how the wine producers from the three case studies were able to implement strategies for sustainability into their wine production stages. The main key factors which helped enable these organizations to adapt their business models included their willingness to adapt, following examples of organizations that had already made the transition, collaboration with a variety of people and organizations, knowledge and information sharing programs, and having a regular staff that believes in the core mission and works for that goal.

It is recommended that managers from the wine industry refer to this study, which analyzes how ideas travel in the wine industry, enabling and facilitating the transition to sustainable strategies. Based on the main findings chapter, it is evident that these factors were crucial to the development of strategies for sustainability in the production of wine.

7.2: Limitations and Future Research

It is important to note that there are some limitations to this research which must be taken into consideration. The first limitation of this research is that all the organizations that have been used as case studies are from the Alentejo region. Although the Alentejo is one of the major wine producing regions in Portugal, having only wine producers from the Alentejo omits the experience of other important regions, such as the Douro and Lisbon regions. Furthermore, as mentioned by almost every interviewee, the Alentejo region provides optimal conditions for sustainable practices, such as organic and biodynamic farming. This means that some of these practices may be more difficult to implement in other wine regions.

Another limitation of this research is the criteria that was established for selecting case studies, the primary criteria being a wine producer that uses an organic, regenerative, or biodynamic farming method. By choosing cases specifically with these methods of farming, other wine producers that do not use these methods, however that may have other strategies for sustainability in place, have been omitted from this study.

Since there is limited academic research in management regarding sustainable strategies in the wine industry, it is recommended that future studies be done in order to further improve the results found in this study. Furthermore, I believe it would be interesting to perform a similar research study, however from the opposite point of view, whereby there would be case studies of wine producers who are not implementing any types of sustainable strategies. This would allow the research to be more complete, as it would allow the researcher to discover the main reasons that are preventing wine producers from transitioning to more sustainable practices.

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Appendices

Appendix 1: Data Coding Table

Coding Table

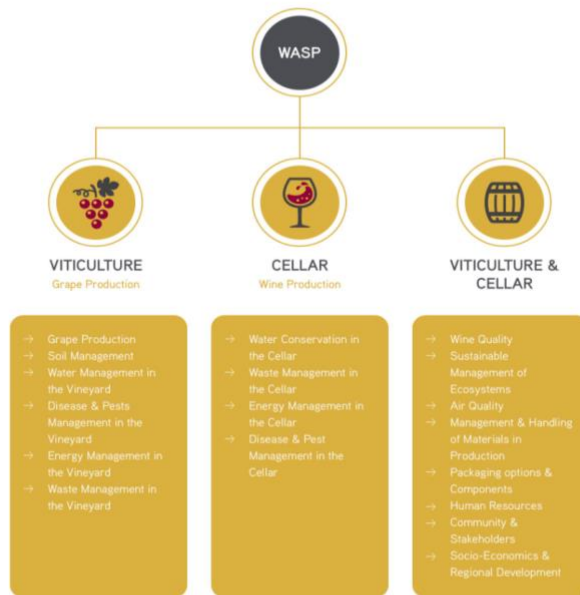
Codes	Supporting Data
Sustainability strategies: Viticulture and farming processes	- Cortes de Cima: organic and biodynamic viticulture, reduced area to switch to organic farming methods - Coelheiros: organic and biodynamic viticulture - Esporão: organic viticulture - Soil management and ensuring the health of soils - Use of animals in the vineyard, to maintain healthy soils - Use of bat shelters and other prey shelters, which help with pest control for organic and biodynamic farming - Allowing native plant species to flourish - Weeds are important, let them grow - Cover crops!! Very important for maintaining healthy soils - Limit use of tractors and tilling in the vineyards: try to - Goal: Allow biodiversity to flourish, creating and managing ecosystems, maintaining an equilibrium with nature
Sustainability strategies: Water management	- Cortes de Cima uses water management methods in the wine production process and in viticulture processes: using water guns, water meters to monitor consumption - Coelheiros uses water management in wine production and viticulture processes: water meters - Esporão uses water management, water meters
Sustainability strategies: Energy management	- Cortes de Cima picks grapes during the night so that they are cool upon arrival to the cellars and do not require energy to be cooled - Esporão uses concrete barrels and clay-walled cellars to maintain a cool

	environment without the need for energy - Esporão also has underground cellars, built by the same people who built the Lisbon metro, which allows them to maintain the area cool
Sustainability strategies: Social sustainability	- Having a regular staff - Providing specialized trainings and hiring specialized people - All employees receive regular training, in order to help the organizations achieve their environmental sustainability goals - The norm: agricultural workers receive low compensation, work on short-term contracts - All organizations keep the same staff, do not hire on short-term contracts. - Provide benefits such as meals, transportation to and from work, on-site accommodation - “It’s very important because if you work with the same people all year, you can teach them new techniques and the work we are doing in our vineyard is only possible because we have this very strong team.” (M. Tereno, Cortes de Cima) - Supporting local and national industries, hiring local construction workers, using local materials, local artisanal influences Eg: Coelheiros using local artisan and traditional art for their bottle labels, Esporão employing local construction workers to create traditional clay walls, Cortes de Cima buying employee clothes from local sources
Knowledge sharing programs	- WASP programme: Coelheiros is a member, Esporão collaborated in the early stages of the programme and serves as an example - Provides guidelines and key indicators for sustainability for wine producers - Voluntary and free

	- Workshops, consultants, field studies and field trips, trainings in all kinds of fields, from viticulture to marketing - Rigorous criteria to ensure dedication to achieving sustainability goals, not just getting certification for marketing purposes
Travelling	- Travelling or international work experience involved in almost all cases - Anna Jorgensen lived and worked in many wine regions in the world, worked on organic vineyards - Esporão travelled abroad to learn about organic viticulture - João Raposeira lived in many different regions and worked in agriculture - To create the WASP programme, examples abroad were consulted - Chile and California have been important references for sustainability in wine production
“Idea carriers”	- Use of idea carriers to achieve sustainability goals, to train workforce - Consultants for things such as biodiversity, classes - Trainings, refreshers to maintain knowledge up to date - Knowledge sharing programs like WASP
Motivation for making transition	- Need to adapt to survive as a wine producer - Many wine producers have short-term mentality, think about profit now but don't think that if changes aren't made they won't have a business in 10 years from now - Goal is to create a high-quality wine, using high quality ingredients and soils - All organizations agree to the willingness to adapt is the most important factor in successfully implementing sustainability in wine production

Appendix 2: WASP Assessment Criteria

WINES OF ALENTEJO SUSTAINABILITY PROGRAMME **SCOPE**



The first implementation phase, called Primary Intervention Chapters, was developed for these three general sectors of wine production. In a second implementation phase released in 2018, the evaluation method was adapted to accommodate the increase in Chapters. This started the evaluation and implementation of the Secondary Intervention Chapters for eligible members, according to the WASP rules.

PRIMARY INTERVENTION CHAPTERS

Grape Production
Soil Management
Water Management in the Vineyard
Disease & Pests Management in the Vineyard
Energy Management in the Vineyard
Waste Management in Vineyard
Water Conservation in the Cellar
Energy Management in the Cellar
Waste Management in the Cellar
Disease & Pest Management in the Cellar
Human Resources

SECONDARY INTERVENTION CHAPTERS

Wine Quality
Sustainable Management of Ecosystems
Air Quality
Management & Handling of Materials in Production
Packaging options & Components
Community & Stakeholders
Socio-Economics & Regional Development

After completion of the self-assessment for the 11 Primary Intervention Chapters, an overall ranking called the 'General Sustainability Category' will be established. This ranking will fall within one of four ranges defined for the **General Sustainability Category** (Pre-Initial, Initial, Intermediate and Developed). The 11 Primary Intervention Chapters were developed with 108 criteria.

CHAPTER	Nº OF CRITERIA
Grape Production	14
Soil Management	12
Water Management in the Vineyard	4
Disease & Pests Management in the Vineyard	23
Energy Management in the Vineyard	3
Waste Management in the Vineyard	2
Water Conservation in the Cellar	15
Energy Management in the Cellar	8
Waste Management in the Cellar	16
Disease & Pest Management in the Cellar	1
Human Resources	10

Source: Vinhos do Alentejo,

<https://sustentabilidade.vinhosdoalentejo.pt/en/wines-of-alentejo-sustainability-programme>