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MASTER'S THESIS

IMPACT OF THE EUROPEAN GREEN DEAL ON THE EUROPEAN WINE INDUSTRY

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CONTENT

CONTENT **2**
LIST OF ABBREVIATIONS **3**
LIST OF TABLES AND FIGURES **4**
INTRODUCTION **5**
1. THEORETICAL ASPECTS OF THE IMPACT OF THE EUROPEAN GREEN DEAL ON THE EUROPEAN WINE INDUSTRY **9**
1.1. Concept of the European Green Deal and its strategies 9
1.2. Overview of the European Wine Industry 19
1.3. Connection between the European Green Deal and the European Wine Industry 24
2. EMPIRICAL RESEARCH LEVEL OF THE EUROPEAN GREEN DEAL ON THE EUROPEAN WINE INDUSTRY **27**
2.1. Research on the links between the European Green Deal and the European Wine Industry 27
2.2. Research model of the impact of the European Green Deal on the European Wine Industry 34
3. RESEARCH RESULTS **40**
3.1. Research Methodology 40
3.2. Research Data Analysis and Evaluation of the Research Results 46
CONCLUSIONS **49**
SUMMARY **53**
LIST OF REFERENCES **55**
LIST OF DATA SOURCES **60**
Annex 1 61

LIST OF ABBREVIATIONS

EGD – European Green Deal

EU – European Union

EC – European Commission

CAP – Common Agricultural Policy

LIST OF TABLES AND FIGURES

Figure 1. Farm to Fork strategy, UN FAO. 14

Table 1. Created by the author (source: Eurostat) 20

Table 2. Created by the author (source: Eurostat) 21

Table 3. Created by the author (source: OIV) 23

Table 4. Created by the author. 34

Table 5. Created by the author. 41

INTRODUCTION

Relevance of the topic. For some time now, at least in the last 20 years, but with much more visibility in the last decade, issues such as climate change, sustainable development, corporate social responsibility and other terms have regained great value, to the point of being taken into account by citizens as an important issue on the public agenda, and by politicians and governments in their electoral programmes. All these issues are encompassed by the European Green Deal (EGD), a series of proposals launched by the European Commission (EC), that aims to transform the European Union (EU) into a modern, resource-efficient, and competitive economy, ensuring no net emissions of greenhouse gases by 2050, decoupling economic growth from resource use and inclusive transition.

Green initiatives aimed at transforming the productive matrix of companies and countries are increasingly gaining ground and penetrating the society, with both positive and negative impacts, and with a large number of supporters and detractors of these ideas. It is crucial to understand the impact of such proposals framed in the European Green Deal, the "Magna Carta" of these ideas at the European Union level. One of the sectors to which this regulatory framework gives attention is agriculture, and therefore within it, the European wine industry. In a world with a growing consumption of alcoholic beverages, but with the awareness of wanting goods whose production is environmentally friendly, the European wine industry has an essential role in trying to produce wines in the most organic and sustainable way possible, while on the other hand trying to cope with the tangle of bureaucratic regulations and the effects of climate change on its vineyards. The proposal of innovative green and sustainable business models is of immense relevance.

Level of problem investigation. The proposals of the European Green Deal present a number of both challenges and opportunities, but the consequences of these challenges are always seen in the short term, while the benefits of the opportunities presented are often seen in the long term, which is why the adaptation of these proposals does not penetrate with much initial conviction (Pappalardo et al., 2013). The challenges concentrate on three crucial aspects:

1. Production Cost Increase: New environmental and sustainability regulations lead to pricier wine production due to changes in practices or materials.

2. Regulatory Burden: Increased regulations create more administrative tasks for wineries.
3. Uncertainty: The evolving regulatory landscape could cause confusion for wineries unsure of compliance methods.

On the other hand, while there may be disadvantages to the implementation, a number of beneficial opportunities present themselves to these proposals, such as the following:

1. Sustainable Wine Demand: Rising consumer interest in sustainable products should boost demand for wines produced with eco-friendly practices.
2. Innovation Push: The EGD aims to incentivize innovation in winemaking, leading to more sustainable techniques or new wine products.
3. Financial Support: The EU offers significant funds to support the green transition, potentially benefiting wineries adopting sustainable practices.

Scientific problem - How will the European Green Deal impact on the European wine industry?

The object of the thesis is to determine what impact has the European Green Deal on the European wine industry, focusing on Spain as a case study.

The aim of the thesis is to investigate the impact of the European Green Deal on the European wine industry.

Objectives of the thesis:

1. To analyse the concept of EGD and its strategies.
2. To describe the European wine industry and its practices.
3. To examine the connection between the EGD and the European wine industry.
4. To analyse the empirical research level regarding the EGD and the European wine industry.
5. Having evaluated the results of theoretical and empirical research, to formulate the research model of the impact of the EGD on the European wine industry.

6. To perform an empirical evaluation of research models of the impact of the EGD on the European wine industry based on a case study in Spain, and to determine what businesses demand.

Structure of the thesis. The first chapter "THEORETICAL ASPECTS OF THE IMPACT OF THE EUROPEAN GREEN DEAL ON THE EUROPEAN WINE INDUSTRY" introduces EGD by discussing the term "EGD", explaining its novelty strategy "Farm to Fork", and how this strategy frames the actions roadmap of the European wine industry. In addition to that, Chapter 1 describes the European wine industry, and briefly explains its connection with the European Green Deal. Last but not least, the theoretical model is illustrated in the first chapter.

The second chapter "EMPIRICAL RESEARCH LEVEL OF THE EUROPEAN GREEN DEAL ON THE EUROPEAN WINE INDUSTRY" reviews existing research on EGD and European wine industry, and presents the analysis of authors that compared the links between the EGD (and the CAP) and the European wine industry and what was the outcome of such research. Lastly, the research model is illustrated, and 6 hypotheses are developed in the second chapter.

The third chapter "RESEARCH RESULTS" discusses the chosen research methodology, analyses the empirical research data and evaluates the research results, presenting the recommended model of impact of the EGD on the European wine industry.

Thesis and research methods. The analysis of the theoretical and analytical premises of the EGD and the European wine industry were performed by general scientific research methods: analysis of scientific literature, synthesis and classification. The empirical part of the study uses a quantitative questionnaire survey method and an interview protocol, with their posterior analysis of the obtained data in order to explore the direct relationship on the impact of the EGD on the European wine industry from the point of view of the business owners.

Literature used in the thesis. The theoretical part of the master's thesis mainly used works by foreign authors and articles related to the concept of the EGD, and its Farm to Fork strategy, as well as articles related to the EC Common Agricultural Policy.

In the practical parts (analytical and empirical), articles and empirical research related to the EGD and its links to the European wine industry are used.

Limitations and obstacles. The topic of the European Green Deal is very recent and has only been in operation for less than 5 years (3 of which were addressed by the COVID-19 pandemic and 2 of which by the successive wars in Eastern Europe and the Middle East). In addition to this, it was very difficult to link this topic to the wine industry in particular, as there have not been the desired number of scientific sources to analyse this topic in more depth. Nevertheless, despite these limitations and obstacles, the thesis focuses on an interview protocol that takes first-hand accounts from those who experience the benefits and burdens of the European Green Deal on a daily basis.

Structure and scope of the thesis. The master‘s thesis consists of an introduction, 3 parts (theoretical, empirical, research results), conclusions, recommendations, and a list of references and data sources. The paper is presented in 60 pages, including 5 tables and 1 figure. In addition to that, the thesis contains 1 appendix. The list of references consists of 48 references. The list of data sources consist of 16 hyperlinks.

1. THEORETICAL ASPECTS OF THE IMPACT OF THE EUROPEAN GREEN DEAL ON THE EUROPEAN WINE INDUSTRY

This chapter provides an overview of the concept of the European Green Deal: discusses the main EGD strategies, with a pronounced emphasis on its agricultural category within the Farm to Fork strategy; presents an in-depth overview of the European wine industry, and the connection between the EGD and the European wine industry based on the existing literature.

1.1. Concept of the European Green Deal and its strategies

The European Green Deal is an overarching policy framework introduced by the European Commission to address climate change issues, promote sustainability standards, and foster environmental protection (Dupont & Torney, 2021). This policy package includes measures to reduce greenhouse gas emissions, promote renewable energy sources, protect biodiversity, and transition towards a circular economy (Cifuentes‐Faura, 2022). The Green Deal encompasses a set of proposals through different strategies and initiatives aimed at transforming the European Union into a climate-neutral and sustainable economy (Rolandi & Saba, 2015). Several references provide insights into the concept of the European Green Deal and its main strategies. Here are the most relevant:

1. The European Green Deal emphasises the importance of sustainable soil management as a key component of its environmental goals. Sustainable soil practices are essential for biodiversity conservation, climate mitigation, and sustainable food production, aligning with the objectives of the Green Deal (Montanarella & Panagos, 2021).
2. Renewable energy plays a crucial role in the European Green Deal's strategy for achieving climate neutrality. The transition to clean energy sources is a central pillar of the Green Deal, aiming to reduce carbon emissions and promote energy efficiency across various sectors, including industry and transportation (Chatzistamoulou & Κουνετάς, 2023).
3. The European Green Deal focuses on promoting resource efficiency, green growth, and clean technologies to drive sustainable development. By rationalising the energy mix towards clean energy sources and adopting green technologies, the Green Deal aims to

advance environmental sustainability and economic growth (Chatzistamoulou & Κουνετάς, 2023).

4. The Green Deal sets ambitious climate goals, aiming to reduce carbon emissions and achieve climate neutrality by 2050. This long-term plan involves a comprehensive set of actions and policies to address climate change, biodiversity loss, and environmental degradation (Zupanič et al., 2021).
5. The European Green Deal aims to shape the future of the European Union by promoting green jobs, skills, and wellbeing economics. The Recovery Plan for Europe, funded with significant investments, is designed to support the transition to a green and sustainable economy, aligning with the goals of the Green Deal (Vaquero et al., 2021).

To enter the topic in more depth, it can be stated that the plan includes potential carbon tariffs for countries that don't curtail their greenhouse gas pollution at the same rate. The mechanism to achieve this is called the Carbon Border Adjustment Mechanism (CBAM). It also includes: a circular economy action plan; a review and possible revision (where needed) of the all-relevant climate-related policy instruments, including the Emissions Trading System; a Farm to Fork strategy along with a focus shift from compliance to performance (which will reward farmers for managing and storing carbon in the soil, improved nutrient management, reducing emissions, etc); a revision of the Energy Taxation Directive which is looking closely at fossil fuel subsidies and tax exemptions (aviation, shipping); a sustainable and smart mobility strategy and an EU forest strategy. The latter will have as its key objectives effective afforestation, and forest preservation and restoration in Europe. It also leans on Horizon Europe, to play a pivotal role in leveraging national public and private investments. Through partnerships with industry and member States, it will support research and innovation on transport technologies, including batteries, clean hydrogen, low-carbon steel making, circular bio-based sectors and the build environment. The EU plans to finance the policies set out in the Green Deal through an investment plan – InvestEU, which forecasts at least €1 trillion in investment. Furthermore, it is projected that around €260 billion per year will be needed by 2030 for investments (European Commission, 2020).

The following are the themes addressed by the European Green Deal as a whole:

Climate. In order to achieve the decarbonisation objectives set, emissions must be reduced in all sectors, from industry and energy, to transport and farming. Climate change is a

global threat and can only be addressed by a global response. The main actions to achieve the said objectives are four:

1. European Climate Law
    a. Set the long-term direction of travel for meeting the 2050 climate-neutrality objective through all policies, in a socially-fair and cost-efficient manner;
    b. Create a system for monitoring progress and take further action if needed;
    c. Provide predictability for investors and other economic actors;
    d. Ensure that the transition to climate neutrality is irreversible.
2. Adaptation Strategy
    a. *Smarter adaptation*, with a precise method of data gathering to react quickly on climate-related risks and losses, and enhance Climate-ADAPT as the European platform for adaptation knowledge;
    b. *Faster adaptation*, to develop and roll out adaptation solutions to help reduce climate-related risk, increase climate protection and safeguard the availability of freshwater;
    c. *More systemic adaptation*, integrating adaptation into macro-fiscal policy, nature-based solutions for adaptation and local adaptation action;
    d. *Stepping up international action for climate resilience through the provision of resources*, by prioritising action and increasing effectiveness, through the scaling up of international finance and through stronger global engagement and exchanges on adaptation.
3. European Climate Pact, which consist of:
    a. *Green Areas*, with an idea to plant 3 billion extra trees;
    b. *Green transport*, with the implementation of simpler, safer, healthier, and cheaper solutions to fossil-burning vehicles, such as sharing electric cars, bicycles, green buses and trains;
    c. *Green buildings*, with the renovation of 35 million old structures by 2030 and the consequent creation of nearly 160,000 new green jobs in the construction sector;
    d. *Green skills*, that will promote and support green employment, address the skilling and re-skilling of workers and anticipate changes in workplaces of the future.

4. Climate Diplomacy: The European Union as a bloc will promote this ambitious global action through:
    a. The UN climate convention (UNFCCC) and other international forums;
    b. Bilateral relations with non-EU countries;
    c. Policies and initiatives at EU and international level;
    d. Finance to support developing countries in their efforts to tackle climate change.

Energy. The EGD focuses on 3 key principles for the clean energy transition, which will help reduce greenhouse gas emissions and enhance the quality of life of its citizens:

1. Ensuring a secure and affordable EU energy supply;
2. Developing a fully integrated, interconnected and digitalised EU energy market;
3. Prioritising energy efficiency, improving the energy performance of buildings and developing a power sector based largely on renewable sources.

The Commission's main objectives to achieve this are:

1. Build interconnected energy systems and better integrated grids to support renewable energy sources;
2. Promote innovative technologies and modern infrastructure;
3. Boost energy efficiency and eco-design of products;
4. Decarbonise the gas sector and promote smart integration across sectors;
5. Empower consumers and help EU countries to tackle energy poverty;
6. Promote EU energy standards and technologies at global level;
7. Develop the full potential of Europe's offshore wind energy;

The main strategies to achieve the said objectives are six:

1. Energy System Integration Strategy;
2. Hydrogen Strategy;
3. Offshore Renewable Energy Strategy;
4. Renovation Wave;
5. Methane Strategy;
6. Trans-European Networks for Energy.

To meet the EU's energy and climate targets for 2030, EU countries need to establish a 10-year integrated national energy and climate plan (NECP) for the period from 2021 to 2030.

The national plans outline how the EU countries intend to address five areas: energy efficiency, renewables, greenhouse gas emissions reductions, interconnections, and research and innovation.

Agriculture. The link between healthy people, healthy societies and a healthy planet puts sustainable food systems at the heart of the EGD, the EU's sustainable and inclusive growth strategy. It is designed to boost the economy, improve people's health and quality of life, and care for nature.

The European agriculture and food system, supported by the Common Agricultural Policy (CAP), is already a global standard in terms of safety, security of supply, nutrition and quality (Pe'er et. al. 2020). Now, it must also become the global standard for sustainability. A shift to a sustainable food system can bring environmental, health and social benefits, as well as offer fairer economic gains.

The EU's goals are:

- To ensure food security in the face of climate change and biodiversity loss;
- Reduce the environmental and climate footprint of the EU food system;
- Strengthen the EU food system's resilience;
- Lead a global transition towards competitive sustainability from farm to fork;

The main actions to achieve the said goals are the following:

1. Common Agricultural Policy reform and the EGD Organic Farming Action Plan Welfare of farmed animals;
2. Nutrition labelling;
3. Common Agricultural Policy Strategic Plans EU agri-food promotion policy;
4. Sustainable use of pesticides.

Next, they cannot be resilient to crises such as the COVID-19 pandemic if they are not sustainable. There is a big need to redesign the food systems which today account for nearly one-third of global greenhouse gas emissions, consume large amounts of natural resources, result in biodiversity loss and negative health impacts (due to both under- and over-nutrition) and do not allow fair economic returns and livelihoods for all actors, in particular for primary producers. Putting food systems on a sustainable path also brings new opportunities for operators in the food value chain. New technologies and scientific discoveries, combined with increasing public awareness and demand for sustainable food, will benefit all stakeholders.

The Farm to Fork Strategy aims to accelerate the transition to a sustainable food system that should:

- Have a neutral or positive environmental impact;
- Help to mitigate climate change and adapt to its impacts;
- Reverse the loss of biodiversity.

Farm to Fork strategy as a key point of the Agriculture section of the EGD: the food systems ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food, and preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade. The strategy sets out both regulatory and non-regulatory initiatives, with the common agricultural and fisheries policies as key tools to support a just transition.

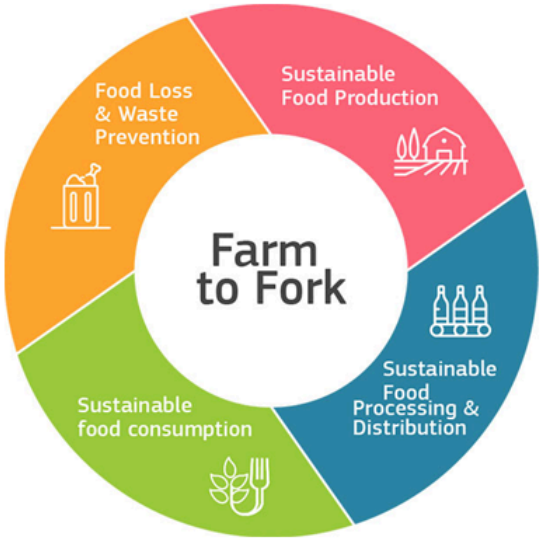

Figure 1. Farm to Fork strategy, UN FAO.

Industry. The new Industrial Strategy for Europe will lead the twin green and digital transitions and become even more competitive globally. It will help industry to reduce their carbon footprint by providing affordable, clean technology solutions and by developing new business models. The Strategy was updated based on the lessons learnt from the COVID-19 pandemic. The EU aims to ensure that the European industry can lead the accelerated green and digital transitions. To fulfil that purpose, there are six actions to consider in this sector:

1. *Industrial strategy*, with a focus on its ecosystems, which are 14: aerospace and defence, agri-food, construction, cultural and creative industries, digital, electronics, energy intensive industries, energy-renewables, health, mobility – transport – automotive, proximity, social economy and civil security, retail, textile and tourism.
2. *European Battery Alliance*, who aims to develop an innovative, competitive and sustainable battery value chain in Europe, following these steps: raw and processed materials > cell component manufacturing > cell manufacturing > battery pack manufacturing > electric vehicle manufacturing > recycling > raw and processed materials.
3. *European Raw Materials Alliance*, who aims to make Europe economically more resilient by diversifying its supply chains, creating jobs, attracting investments to the raw materials value chain, fostering innovation, training young talents and contributing to the best enabling framework for raw materials and the circular economy worldwide.
4. *Sustainable batteries*, with its consequent regulation (Batteries Regulation, of 2020, December 10th). This Regulation aims to ensure that batteries placed in the EU market are sustainable and safe throughout their entire life cycle.
5. *European Clean Hydrogen Alliance*, that will establish an investment agenda and support the scaling up of the hydrogen value chain across Europe. The alliance will play a crucial role in facilitating and implementing the actions of the new European hydrogen strategy and in particular its investment agenda.
6. *Circular Plastics Alliance*, who aims to boost the EU market for recycled plastics to 10 million tonnes by 2025. The alliance covers the full plastics value chains and includes 293 organisations representing industry, academia and public authorities, fisheries policies as key tools to support a just transition.

Environment and oceans. The EGD priorities for Europe's seas, oceans, and environment include:

1. Protecting the biodiversity and ecosystems;
2. Reducing air, water and soil pollution;
3. Moving towards a circular economy;
4. Improving waste management;
5. Ensuring the sustainability of the blue economy and fisheries sectors.

The main strategy to achieve the objectives of this sector is the EU Forest Strategy for 2030. This is one of the flagship initiatives of the EGD and builds on the EU biodiversity strategy for 2030. The strategy will contribute to achieving the EU's greenhouse gas emission reduction target of at least 55% by 2030 and climate neutrality by 2050. It recognises the central and multifunctional role of forests, and the contribution of foresters and the entire forest-based value chain for achieving a sustainable and climate neutral economy by 2050 and preserving lively and prosperous rural areas. As well, this strategy will support the socio-economic functions of forests for thriving rural areas and boosting forest-based bio-economy within sustainability boundaries. It will also protect, restore and enlarge the EU's forests to combat climate change, reverse biodiversity loss and ensure resilient and multifunctional forest ecosystems by promoting the sustainable forest bioeconomy for long-lived wood products; ensuring sustainable use of wood-based resources for bioenergy; promoting non-wood forest-based bioeconomy, including ecotourism; developing skills and empowering people for sustainable forest-based bioeconomy; protecting EU's last remaining primary and old-growth forests; ensuring forest restoration and reinforced sustainable forest management for climate adaptation and forest resilience; re- and afforestation of biodiverse forests, including by planting 3 billion addition trees by 2030; providing financial incentives for forest owners and managers for improving the quantity and quality of EU forests. The strategy also focuses on: Strategic forest monitoring, reporting and data collection; developing a strong research and innovation agenda to improve the knowledge on forests; implementing an inclusive and coherent EU forest governance framework and stepping up implementation and enforcement of existing EU acquis.
But that's not all, there are 11 other actions that will compose the Environment and Oceans sector of the EGD. The main aim of these is:

1. *Biodiversity Strategy for 2030*, aims to put Europe's biodiversity on a path to recovery by 2030. However, this needed some changes, and due to the COVID-19 context, the strategy aims to build societies' resilience to future threats such as climate change, forest fires, food insecurity and disease outbreaks (including by protecting wildlife and fighting illegal wildlife trade).
2. *Circular economy action plan*, aims to make sustainable products the norm in the EU; empower consumers and public buyers; focus on sectors that use most resources and where the potential for circularity is high such as: electronics and ICT, batteries and

vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients; ensure less waste, make circularity work for people, regions and cities; lead global efforts on circular economy.

3. *Chemicals strategy for sustainability*, aims to better protect citizens and the environment; boost innovation for safe and sustainable chemicals.
4. *Organic action plan*, aims to achieve the EGD target of 25% of agricultural land under organic farming by 2030, with a stronger support in the new common agricultural policy, and focusing on research and innovation (Alons, 2017).
5. *8th Environment Action Programme*, aims to accelerate the transition to a climate-neutral, resource-efficient and regenerative economy, which gives back to the planet more than it takes. It recognises that human wellbeing and prosperity depend on the healthy ecosystems within which people operate.
6. *Blue economy strategy*, aims to contribute to climate change mitigation by developing offshore renewable energy, decarbonizing maritime transport and greening ports. It will also make the economy more circular by renewing the standards for fishing gear design, for ship recycling and for the decommissioning of offshore platforms. What is more, by developing green infrastructure in coastal areas, the biodiversity and landscapes will be preserved, while benefiting tourism and the coastal economy.
7. *Zero pollution action plan*, set to be done by 2050 is for air, water and soil pollution to be reduced to levels no longer considered harmful to health and natural ecosystems, that respect the boundaries with which the planet Earth can cope, thereby creating a toxic-free environment.
8. *EU waste and recycling policy*, aims to protect the environment and human health and help the EU's transition to a circular economy. It sets objectives and targets to improve waste management, stimulate innovation in recycling and limit landfilling.
9. *Sustainable batteries*, aims to ensure that batteries placed in the EU market are sustainable and safe throughout their entire life cycle.
10. *'Farm to Fork' strategy* aims to accelerate the transition to a sustainable food system.
11. *Common Fisheries Policy*, a part of the common agricultural policy (CAP), has the same objectives: increase productivity, stabilise the markets, provide a source of healthy food and ensure reasonable prices for consumers.

Transport. This sector represents around 25% of the EU's total greenhouse gas emissions, and these emissions have increased over recent years. As a matter of fact, 2021 was the European Year of Rail, shining a light on one of the most sustainable and safest transport modes there are. While this sector embraces many others mentioned, still there are two main actions to mark:

1. *Sustainable and Smart Mobility Strategy*, aims to reduce 90% of greenhouse gas emissions by 2050, delivered by a smart, competitive, safe, sustainable, accessible and affordable transport system (trains, motor vehicles, among others).
2. *Connecting Europe Express*, criss-crossing 26 countries, it traced many of Europe's routes, connecting countries, businesses and people. With 3 gauges-trains, 40 railway partners, 5 overnight trips, >1000 stops, 33 border crossings and 20,000 kilometres of journey, this initiative helped to achieve the transport's sector objectives.

Finance and regional development. To achieve the goals set by the EGD, the European Commission has pledged to mobilise at least €1 trillion in sustainable investments over the next decade. 30% of the EU's multiannual budget (2021-2028) and the EU's NextGenerationEU (NGEU) instrument to recover from the COVID-19 pandemic, has been allocated for green investments. In addition, sustainable finance measures, including the Taxonomy Regulation for classifying green investments, will contribute to the European Green Deal by boosting private sector investment in green and sustainable projects.

Research and innovation. The newest plan for research and innovation in Europe is called Horizon Europe, and it will drive the necessary systemic changes to reach climate neutrality and ensure an inclusive ecological and economic transition. Horizon Europe, in synergy with other EU programmes, will be key to leveraging national public and private investment. Together they will foster new technologies, sustainable solutions and disruptive innovation and spread successful new solutions across Europe and the world. Over 35% of Horizon Europe spending will contribute to climate objectives.

The missions in Horizon Europe will mobilise research and innovation, catalyse action, deliver impact, demonstrate solutions, and produce European public goods. At the same time, they aim to capture citizen's imagination and inspire confidence in the transformations ahead. 4 out of the 5 mission areas in Horizon Europe directly support the EGD: Healthy oceans, seas, coastal and inland waters.

In summary, the European Green Deal represents a transformative agenda that seeks to drive sustainable development, combat climate change, and promote environmental protection within the European Union. By focusing on sustainable soil management, renewable energy, resource efficiency, and green growth, the Green Deal aims to accelerate the transition towards a climate-neutral and environmentally sustainable economy.

1.2. Overview of the European Wine Industry

The European wine industry is a significant contendant in the global wine market, characterised by a rich history, diverse production practices, and varying market dynamics. Currently, the total surface area of vineyards planted in Europe remains substantial, with countries like France, Italy, and Spain leading in vineyard acreage (Maykish et al., 2021). These vineyards contribute to the production of a wide range of wines, from traditional varieties to innovative blends, catering to diverse consumer preferences both within Europe and internationally.

Imports/Exports. In terms of imports and exports, the European wine industry is a major player in the global market. European countries are not only significant producers but also major exporters of wine, with a strong presence in markets worldwide. The European Union is the largest exporter of wine in the world, accounting for more than 69% of global exports (Katunar et al., 2021). This strong export presence is driven by major wine-producing countries such as Spain, France, Italy, and Germany (Anderson & Nelgen, 2009). The EU is a key player in global wine trade, with countries like the aforementioned being major exporters of wine to various regions, including North America, Asia, and other parts of the world (Balogh & Jámbor, 2017). These countries not only have a long-standing tradition of winemaking, but they also have favourable climate conditions and diverse terroirs that contribute to the distinctive flavours and characteristics of their wines (Katunar et al., 2021).

On the import side, European countries also engage in wine trade with each other and with countries outside the EU, contributing to the overall dynamics of the global wine market.

The following table shows data from 2022, explaining the amount of land planted by country, their production, exports and imports, consumption overall and per capita, and the number of varietals (different types of grapes). As well, for reference, in green the highest rank is marked, in red – the lowest:

Country	Surface (ha)	Production (1000 hl)	Exports (1000 hl)	Imports (1000 hl)	Consumption (1000 hl)	Consumption (l/capita +15)	Varietals
Denmark	[n.d.]	[n.d.]	272	1,805	1,560	97.0	0
Estonia	[n.d.]	110	55	225	278	25.1	0
Finland	[n.d.]	[n.d.]	102	747	565	12.2	0
Ireland	[n.d.]	[n.d.]	79	853	830	21.6	0
Latvia	[n.d.]	27	905	954	83	5.2	0
Lithuania	[n.d.]	47	597	914	359	46.0	0
Netherlands	[n.d.]	[n.d.]	649	4,214	3,508	24.4	0
Poland	[n.d.]	[n.d.]	106	1,389	1,220	3.8	0
Sweden	[n.d.]	[n.d.]	78	2,089	2,300	27.8	0
Norway	[n.d.]	[n.d.]	26	867	789	17.8	0
Spain	910,859	33,676	21,406	958	10,700	26.8	154
France	792,565	42,193	14,281	7,230	24,714	46.2	383
Italy	688,985	47,533	21,358	1,552	22,800	43.4	454
Belgium	[n.d.]	15	431	3,071	2,666	27.9	67
Malta	[n.d.]	13	[n.d.]	67	69	18.3	0
Hungary	393,296	2,726	1,106	108	2,143	25.9	139
United Kingdom	234	79	1,010	14,001	13,034	23.5	50
Portugal	194,713	6,527	2,963	2,935	5,390	60.8	344
Romania	191,181	3,808	236	366	3,900	23.9	230
Moldova	142,800	1,460	1,509	2	454	13.4	105
Greece	109,489	2,425	289	183	1,966	21.8	219
Germany	103,079	8,218	3,839	14,802	19,800	27.5	156
Bulgaria	67,055	918	449	125	879	14.7	120
Austria	48,491	2,465	608	484	2,256	29.4	79
Ukraine	41,800	990	68	450	1,400	3.8	0
North Macedonia	25,796	525	656	2	150	8.6	102
Serbia	21,328	705	112	209	800	10.8	0
Croatia	21,311	704	53	249	1,019	28.9	361
Czech Republic	18,189	492	88	1,446	2,052	22.8	29
Slovenia	15,630	758	61	92	800	45.3	119
Slovakia	15,358	319	432	743	665	14.4	45
Switzerland	14,704	979	13	1,784	2,553	34.9	217

Albania	11,024	160	[n.d.]	49	207	8.7	0
Cyprus	7,826	100	4	84	148	14.8	116
Belarus	4,860	320	31	681	917	11.7	0
Bosnia and Herzegovina	4,679	55	37	90	111	3.9	342
Montenegro	3,042	144	62	27	110	21.4	44
Luxembourg	1,241	76	53	231	275	53.0	16

Table 1. Created by the author (source: Eurostat)

Spain is the undisputed leader with almost 911 thousand hectares of vineyards (Carrasco et. al. 2021), followed by France with 792 thousand hectares and Italy with almost 689 thousand hectares. However, having more vineyards does not mean that more is consumed in that same country, or better yet, that more is exported. Furthermore, countries with little or no arable land for vine cultivation end up importing more wine. Examples such as Belgium, the Netherlands, Sweden, the United Kingdom, Ireland, Denmark, Poland and Finland confirm this.

The countries with the largest arable land for vine cultivation end up being the ones that consume the most, but they do not necessarily consume what they produce, since in many cases they end up exporting the wine produced. For reference, in green the highest rank is marked, in red – the lowest. These data can be seen in the following table:

Country	**Surface (ha)**	**Vineyard holdings (number)**	**Average area under vines (ha per holding)**
EU	**3,194,614**	**2,227,672**	1.43
Spain	910,859	483,749	1.88
France	792,565	75,153	10.55
Italy	688,985	302,686	2.28
Romania	180,683	844,015	0.21
Portugal	173,254	114,220	1.52
Germany	393,296	35,093	2.95
Greece	103,058	193,284	0.53
Hungary	62,108	26,279	2.36

Bulgaria	60,169	44,289	1.36
Austria	46,273	12,098	3.82
Czechia	18,099	16,541	1.09
Croatia	17,628	33,377	0.53
Slovenia	15,363	28,498	0.54
Slovakia	13,108	4,371	3.00
Cyprus	7,613	13,740	0.55
Luxembourg	1,294	279	4.64

Table 2. Created by the author (source: Eurostat)

There are no results for the area under vines measured in hectares, vineyard holdings and average area under vines measured by hectares per holding for the following European countries: Belgium, Denmark, Estonia, Ireland, Latvia, Lithuania, Malta, Netherlands, Poland, Finland and Sweden.

Consumption. Consumption patterns in Europe reflect a long-standing tradition of wine appreciation, with wine being an integral part of European culture and cuisine. Per capita wine consumption in Europe varies across countries, with some regions showing a higher affinity for wine compared to others. Countries like France, Italy, Spain and Portugal have a strong wine-drinking culture, where wine is deeply ingrained in their cultural and culinary traditions, being consumed regularly as part of meals, celebrations, and social gatherings (Rayess & Mietton‐Peuchot, 2015). In contrast, countries in Northern Europe, such as Sweden and Finland, have lower wine consumption levels (Lecat et al., 2019). However, consumption patterns are evolving, with shifts in consumer preferences, health considerations, and lifestyle choices influencing the demand for different types of wines.

Below, we can see a comparison of the consumption of wine in the EU countries, taking the data of 2019 (the last normal working year before COVID-19 pandemic) and 2022 (the last year with available data), and their variation. As well, for reference, in green the highest rank in the variation is marked, in red – the lowest:

Country	Consumption of wine in European countries (2019 data, in million hectoliters)	Consumption of wine in European countries (2022 data, in million hectoliters)	2022/2019 Variation (in million hectoliters)
EU	**99.1**	**99.9**	**-0.8**
France	24.7	25.3	+0.6
Italy	22.6	23.0	+0.4
Germany	19.8	19.4	-0.4
Spain	10.2	10.3	+0.1
Portugal	5.4	6.0	+0.6
Romania	3.7	3.7	0
Netherlands	3.5	3.6	+0.1
Austria	2.3	2.4	+0.1
Czech Republic	2.2	2.2	0
Belgium	2.7	2.0	-0.7
Sweden	2.0	2.0	0

Table 3. Created by the author (source: OIV)

In conclusion, the European wine industry is renowned worldwide for its rich history, diverse range of grape varieties, and exceptional quality of wine production. Europe boasts a substantial surface of vineyards, with approximately 3 million hectares devoted to grape cultivation. This vast expanse of vineyards allows for the production of a wide range of wines, including red, white, rosé, and sparkling varieties. The European wine industry is also a dynamic and multifaceted sector characterised by diverse production practices (with each country having its unique characteristics and contributions), trade dynamics, consumption patterns, and regulatory frameworks. Understanding key metrics such as vineyard surface area, imports and

exports, consumption patterns, regulatory environments, macroeconomic factors, and environmental sustainability is essential for comprehensively analysing the current landscape of the European wine industry and anticipating future trends and challenges. Additionally, the European wine industry has faced challenges and changes in recent years, including the surge of "New World" (USA, Argentina, Chile, South Africa, Australia, New Zealand and others) producers, changing consumer preferences, and the emergence of new wine markets in Asia (Anderson & Nelgen, 2009). Overall, the European wine industry is a diverse and significant sector that is both economically and culturally important (Katunar et al., 2021).

1.3. Connection between the European Green Deal and the European Wine Industry

Research on the connection between the European Green Deal and the European wine industry is limited. However, it is evident that the goals and initiatives of the European Green Deal, such as promoting sustainable agriculture and reducing carbon emissions, will have an impact on the wine industry (Lecat et al., 2019). Wineries and vineyards will need to adapt their practices to meet the sustainability standards outlined in the European Green Deal. This may include implementing organic or biodynamic farming methods, minimising water usage, reducing chemical inputs, and investing in renewable energy sources. Furthermore, the European wine industry will also need to address the challenges of climate change, as rising temperatures and changing weather patterns can significantly impact grape cultivation and wine production (Hannah et al., 2013).

Some potential impacts of climate change on the European wine industry include shifts in growing regions, changes in grape varieties cultivated, and alterations in wine quality and style (Mozell & Thach, 2014). Specifically, the European Green Deal will have a significant impact on the European wine industry. The aim should be to maintain the value of products, materials, and resources in the economy for as long as possible and to minimise waste generation. This shift towards a circular economy will require changes in production and consumption patterns within the wine industry. Furthermore, the European Green Deal emphasises the importance of mitigating climate change and reducing greenhouse gas emissions. In the context of the wine

industry, this means that wineries will need to address the effects of climate change on grape production and adapt their practices accordingly to minimise the negative impacts (Monteagudo et al., 2021).

These adaptations may include adjusting planting and harvesting schedules, implementing irrigation strategies to cope with changing rainfall patterns, and exploring new grape varieties that are more resilient to climate change. Overall, the European Green Deal presents both challenges and opportunities for the European wine industry. On one hand, wineries will need to make significant changes to their production and management practices in order to align with the goals of the European Green Deal and ensure sustainable and climate-friendly processes. Implications for agricultural practices in the wine industry include transitioning to organic or biodynamic farming, improving water and energy efficiency, and addressing the effects of climate change on grape production (Pappalardo et al., 2013).

The European Green Deal will also create opportunities for the wine industry to differentiate itself by adopting sustainable practices and producing environmentally-friendly wines (Schmidt, 2019). These actions can contribute to the overall environmental objectives of the European Green Deal and position European wines as premium products with a lower carbon footprint (Vieri, 2012). Overall, the European Green Deal will require significant changes in the production and management practices of the European wine industry. These changes will be necessary to promote environmental sustainability, mitigate climate change, and contribute to the circular economy. The European Green Deal will have a profound impact on the European wine industry. It will drive the industry to adopt more sustainable practices, reduce greenhouse gas emissions, and adapt to the challenges posed by climate change. The European Green Deal will require the wine industry to make significant changes in their production and management practices to align with the goals of sustainability and climate-friendliness.

In conclusion, the European Green Deal's focus on sustainability, renewable energy, climate goals, and agricultural practices directly intersects with the European wine industry. It has the potential to influence the profitability of European wineries through regulatory changes, the promotion of sustainable soil management practices, the encouragement of circular economy principles adoption, and the incentivization of renewable energy investments. By aligning with the objectives and principles of the Green Deal, wineries can enhance their economic performance, improve operational efficiency, and contribute to a more sustainable and profitable

future. By promoting sustainable practices, addressing climate change, and driving environmental considerations to the forefront of policy discussions, the Green Deal influences the regulatory landscape, production practices, and economic performance of wineries in Europe, to ensure that they operate in a manner that aligns with the EU's climate and environmental goals.

2. EMPIRICAL RESEARCH LEVEL OF THE EUROPEAN GREEN DEAL ON THE EUROPEAN WINE INDUSTRY

This chapter provides the research carried out by the different authors regarding the consumers consumption of wine in Europe, the green initiatives of different countries regarding what is it stated in the EGD, facilitators, and barriers for making that happen, such as the state of the soil, sustainability process, actions on climate change, regulations, emerging innovative business models and the management of natural resources in the wine production process for the completion of success in profitability.

2.1. Research on the links between the European Green Deal and the European Wine Industry

Most of the existing research divides the impact of EGD on the European wine industry in two parts with two subparts on one, which are existing and non-existing, and on the existing impact – negative impact and positive impact. Existing negative impact refers to how EGD impacts on the European wine industry by harming it somehow. On the other hand, existing positive impact refers to the EGD actually improving the European wine industry and helping its actors to perform the way it is intended due to those regulations. In this category we can count factors such as subsidies, regulations, directives, legal support, etc.

This paper focuses on the correlation of the EGD and the European wine industry. How the EGD (through its Farm to Fork strategy, whose valid legal text is the CAP) tries to incorporate into its final remit the regulations and support to be implemented in the European wine industry. Both categories, in which this analysis takes part, involve factors such as soil, fertilisers, actions on climate change (environmental behaviour), natural resources used in the wine production, innovative business models, subsidies given, remarks on sustainability, and more.

Soil. According to Montanarella & Panagos (2021), the term soil is explicitly mentioned in the Farm to Fork strategy and in the Zero Pollution action plan (European Commission, 2019),

but it is indirectly relevant for achieving climate neutrality in 2050, preserving, and restoring ecosystems and biodiversity.

When we talk about land in the context of the European Green Deal, there should be inevitably several crucial aspects to be considered:

1. the biodiversity of the soil itself;
2. the containment of greenhouse gases;
3. the final quality of the product.

When referring to biodiversity, soil makes up a quarter of all the world's biodiversity, and provides the population with nutritious food, drinking water, raw materials, and greenhouse gas savings. Soil plays a very important role in the wine industry, as the final quality of the product will be greatly affected by the state of the soil. The use of fertilisers and pesticides, as well as different chemicals such as cadmium and copper, have a negative impact on the soil, causing even greater problems than those found in the European wine industry. Among them we note soil degradation, with 2.43% of European land being sealed (Panagos et. al., 2015).

In addition to being an important player in the final quality of the product, the impact it has on the fight against climate change should not be overlooked, as it is a crucial sink for greenhouse gases. Good land maintenance practices, from the use of non-harmful chemicals to the recycling of water, would help prevent further erosion of European land. According to Lugato et. al., (2014), recent scientific developments recommend management practices (arable land conversion to grassland, straw incorporation, reduced tillage, ley cropping and cover crops) to increase carbon sequestration in agricultural soils. It is important to note that soil carbon dioxide sequestration helps mitigate the worst consequences of the already unstoppable climate change, balancing sound agricultural practices, food security and nutrition, as well as ecosystem provisioning and adaptation to the United Nations Sustainable Development Goals (Keesstra et. al. 2016).

In the context of European vineyards, the Green Deal plays a crucial role in promoting sustainable soil management practices essential for the health of vineyard ecosystems. Sustainable agricultural practices, as emphasised in the European Common Agricultural Policy (CAP), need to consider local conditions such as climate and the preservation of soil and water resources (Panagos et al., 2015). Additionally, the application of organic farming practices, such as green manure, can positively impact soil microbiota, increase microbial biodiversity, and

enhance the abundance of functional groups relevant to vineyard soil health (Longa et al., 2017). Furthermore, the use of remote sensing data for spatially variable rate fertiliser management in vineyards can contribute to reducing environmental impacts and production costs, aligning with the challenges posed by the European Green Deal (Comparetti & Silva, 2022).

In conclusion, the European Green Deal plays a pivotal role in promoting sustainable soil management practices within European vineyards. By emphasising climate-smart agriculture, biodiversity conservation, and ecosystem health, the Green Deal sets a framework for ensuring the long-term sustainability of vineyard soils and ecosystems in alignment with broader environmental and societal goals (Keesstra, 2024). It recognizes the importance of sustainable soil management in various policy areas, including climate change, biodiversity, agriculture, and desertification, highlighting the need for sustainable water management practices (Montanarella, 2020).

The importance of sustainable **soil** management within the European Green Deal is significant for wineries, as soil health directly affects vineyard productivity and grape quality (Montanarella & Panagos, 2021). Practices promoting sustainable soil management can improve soil fertility, water retention, and overall vineyard health, potentially leading to enhanced grape yields and quality, which are essential for winery profitability. The Green Deal's focus on sustainable soil management is crucial for vineyard ecosystems, as highlighted by research on the impact of environmental conditions and management practices on soil arthropod communities in vineyards. Understanding the relationship between vineyard management and soil biodiversity is essential for promoting ecologically and economically sustainable viticulture (Ghiglieno et al., 2021).

Climate change. Climate change is an indisputable fact at this point, and it is not alien to the European wine industry either. Perhaps even from a moral point of view it could be looked at with a magnifying glass of a high degree, since wine is not a staple product in the basic basket of people and therefore any action (conscious or not) that further damages ecosystems can have a negative impact on society, which every day is more committed to climate change.

According to Hannah et. al. (2013) one of the reasons why the wine industry provides such a useful base from which to explore the impact of climate change more generally is because

of the specific expression of aroma, colour and flavour profile expressed in a wine because of the unique combination of earth and weather based growing conditions.

When referring to the impact that EGD can have on the European wine industry, one must first understand the magnitude of the industry and know how to place it in time and space. A myriad of factors end up influencing the true correlation of climate change with the wine industry (Jones et. al. 2005).

Here are the main ones:

- grape variety planted;
- wine region and its peculiarities in the production process;
- variability of the region's climate (historical context);
- length of harvest by region (and unexpected changes that may occur, such as drought, frost, etc.);
- magnitude of residual sugar, acid, tannin and phenol levels, among other factors;

In conclusion, environmental sustainability and climate change present significant challenges and opportunities for the European wine industry. Changes in climate and weather patterns pose risks to vineyard ecosystems and grape quality, impacting the overall economic potential of wine production (Porras et al., 2021). Embracing environmental practices, such as sustainable viticulture, water management, and energy efficiency, is crucial for ensuring the long-term viability of the European wine industry and mitigating the effects of climate change on vineyard ecosystems (Bandinelli et al., 2020).

Sustainability. Although the definition of sustainability is very broad and includes many branches (from the preservation of biodiversity to the correct use of natural resources), when referring to sustainability in the wine industry, and even more so in the European wine industry, there are three main factors to consider:

1. environmental sustainability;
2. economic sustainability;
3. social sustainability;

It is important not only to preserve biodiversity and the vineyard environment, but also to be able to offer competitive prices to consumers and decent labour guarantees to vineyard workers.

Additionally, the promotion of the circular bioeconomy under the Green Deal offers wineries opportunities to implement sustainable practices that reduce waste, enhance resource efficiency, and create new revenue streams (Kardung et al., 2021). Embracing circular economy principles enables wineries to optimise resource utilisation, cut costs, and improve overall economic performance, thereby contributing to long-term profitability.

Regulations. The Common Market Organization of European wine today plays an important role in the distribution and regulatory positioning, which, based on subsidies, helps many wineries to survive in order to adapt their business models to the sustainability objectives set out in the EGD. According to Corsinovi, P. et. al (2014), this did not happen before, as regulations were more flexible and allowed cheap imports from third countries but maintaining a local market that was not very competitive for local wine consumption. The new CAP for the period 2023-2027 comes to change that trend, having in mind all the post-2020 challenges that this policy faced (Pomarici & Sardone, 2020).

In the context of wineries, the Green Deal's emphasis on sustainability aligns with the need for stricter regulations to mitigate the environmental impact of winery operations. Regulations have been put in place to address issues such as wastewater management, with new, more stringent regulations driving the development of technologies for winery wastewater treatment (Skornia et al., 2020). These regulations aim to ensure that wineries operate in an environmentally responsible manner, aligning with the broader goals of the European Green Deal. Moreover, the Green Deal's focus on sustainability challenges the existing regulatory frameworks governing industries, including wineries. It calls for a rethinking of policies to address climate change and promote a just and inclusive transition towards a more sustainable economy (Pianta & Lucchese, 2020). This shift towards sustainability requires regulatory adjustments to ensure that wineries comply with environmental standards and contribute to the overall goals of the Green Deal.

One of the key metrics influencing the European wine industry is the regulatory environment governing wine production, labelling, and trade. Geographical indications (GIs) play a crucial role in protecting the authenticity and quality of wines produced in specific regions, contributing to the uniqueness and market value of European wines (Meloni et al.,

2019). Regulations related to wine production practices, labelling requirements, and quality standards impact how wines are produced, marketed, and traded within Europe and globally.

In conclusion, the Green Deal's impact on trade dynamics and global governance further underscores the need for regulatory changes in the wine industry. The European model, as influenced by the Green Deal, is evolving to incorporate sustainability as a core principle, affecting the regulatory landscape for wineries (Bongardt & Torres, 2022). These changes reflect a broader shift towards greener practices and environmental responsibility in the wine sector.

Profitability. Based on the study conducted by Pappalardo, G., et. al. (2013), the income of wineries and agricultural holdings is due to the overproduction of wine thanks to the misinterpretation of the flexibility in the regulations at the beginning of the 21st century, coinciding in the time of the regulations the entry into the common currency area of the entire Union. The low cost in the production of wine ended up in that surplus, whose prices became competitive for the local market, but with dubious sustainability practices in the production process.

To evaluate the potential impact of the European Green Deal on the profitability of European wineries, it is crucial to consider the broader context of sustainability and economic factors. The European Green Deal is a comprehensive policy framework aimed at achieving climate neutrality and promoting environmental sustainability, with implications for various sectors, including wineries Sikora (2020). The Green Deal's objective of transitioning towards a climate-neutral economy by reducing carbon emissions and aiming for carbon neutrality by 2050 lays the groundwork for regulatory changes that could influence the profitability of wineries.

The European wine industry is also influenced by macroeconomic factors, including changes in global demand, exchange rates, and economic conditions. The entry of new countries into the world wine market has led to increased competition and shifts in market dynamics, affecting the production and export strategies of European wine producers (Katunar et al., 2021). Understanding the macroeconomic determinants of wine production and consumption is essential for assessing the competitiveness and sustainability of the European wine industry in a global context.

Business models. The EGD through its short and long term sustainability strategies is shaping the European wine industry directly through the demands of wine consumers, preferring a smaller quantity but from a sustainable source. The increase in small wineries producing wine is on the rise and is understood by the industry itself to be due to a structural reordering of its business model following the effects of the last two years. Environmental forces, both internal and external, are pushing the European wine industry to redesign dimensions such as performance, resources, innovation, and value proposition (Ouvrard, S., et. al. 2020).

The Green Deal's emphasis on renewable energy and economic performance is also pertinent for wineries, as the shift to renewable energy sources can lower operational expenses and environmental impact, ultimately boosting profitability (Simionescu et al., 2020). By investing in renewable energy solutions, wineries can decrease their carbon footprint, realise potential cost savings, and benefit from incentives associated with sustainable energy practices (Dressler & Paunovic 2021).

Furthermore, the Green Deal's focus on sustainable development and environmental protection presents challenges and opportunities for the profitability of European wineries (Koralova-Nozharova, 2021). While complying with stricter environmental regulations may require initial investments and operational adjustments, aligning with the Green Deal's principles can enhance wineries' reputation, attract environmentally conscious consumers, and open up new market opportunities, ultimately contributing to long-term profitability.

In summary, it could be said that the EGD through its Farm to Fork strategy and regulated through the Common Agricultural Policy can help vineyards to make better use of resources for winemaking, such as vine care, good soil health, the conscious use of fertilisers, the fight against climate change through improved wine production practices, a logical use of subsidies aimed at alleviating the geographical disadvantages that a vineyard may encounter, the good management of the natural resources provided for each vineyard, from the sufficient use of the sun and the impact it has on grape pigmentation, to the wind, the artificial heating with candles of the frost caused by low temperatures in the early morning period, and the instruments used by the workers to keep the vines in the correct position, such as nets and supports nailed to the ground. However, regulations, profitability and business models are directly impacted by the

EGD in a negative way, mostly due to the misinterpretation of goals set between the EC and the European wine industry.

2.2. Research model of the impact of the European Green Deal on the European Wine Industry

This subchapter provides empirical findings of 7 studies carried out throughout Europe by different authors regarding how each of the aforementioned EGD actions impact on the European wine industry. A table is formed based on the findings (see Table 4), and a research model and hypotheses are presented.

Impact of EGD on the European wine industry **Table 4**

Field researched	Author	Impact on the wine industry	Obstacles/Reasons	Possible solution/reaction
Soil	Montanarella, P., Panagos, P. (2021)	Existing, negative (indirect impact)	Soil contamination (high concentrations of cadmium originated from mineral fertilisers and copper widely used in vineyards and orchards), soil compaction, soil sealing (land degradation), soil erosion (by water).	New tools and methodologies, improved technologies. Reduction of pesticides and fertilisers, recycling the use of water.

Climate change	Gierling, F., Blanke, M. (2021)	Existing, negative (indirect impact)	The use of fossil fuels for transportation, energy demand, heavy glass bottles; water footprint.	Reduction of greenhouse gases emissions by substituting fossil fuels with renewable energy.
	Green, S. (2018)	Existing, dangerous (direct impact)	Brussels bureaucrats usually elevate all issues as a common problem that should be applied to all Member States of the EU.	Downgrading EU policies to a local level, to address concrete climate change problems in a specific region.
Sustainability	Ouvrard, S., Jasimuddin, S. M., Spiga, A. (2020)	Existing, forced (indirect impact)	With more customers demanding sustainability in all businesses, the production costs in the wine industry increases and wineries hardly scope with that.	Design a sustainability roadmap for wineries to make the transition as fast as they can without losing profitability on the way.

Regulations	Corsinovi, P., Gaeta, D. (2019)	Existing, mixed (direct impact)	In terms of trade, the EU is open to discuss free-trade agreements with the outer world (especially with the US), but on a local level is imposing stiff barriers and obstacles to wine labelling, production, and procession, hardening, and stopping the local wine consumption.	The EC should leverage the heavy weight from wineries' shoulders and promote the local consumption of European wine.
Profitability	Pappalardo, G. Et. Al. (2013)	Existing, fuzzy (direct impact)	EC regulations since the entry into the euro of most member countries have been more flexible, allowing vineyards to increase their production capacity. Unfortunately, while this resulted in very high real incomes, the wine was not of the best quality, and the profit ended up being due to overproduction, a practice that was not at all sustainable.	To understand flexible regulations not as a free way for overproduction, but as an incentive to be able to produce a better quality wine, according to the best sustainability practices and with a high added value.

Business models	Ouvrard, S., Jasimuddin, S. M., Spiga, A. (2020)	Existing, forced (direct impact)	The EGD directly affects other agricultural sectors, and the wine industry is affected through them, mostly due to consumers' demands for a more sustainable product.	Clear and openly, make a transition towards a more sustainable business model, or there will be no business at all in the future.

Table 4. Created by the author.

The empirical research model in the figure above presents a two step graph of EGD impact. This is developed based on analysis and findings of the existing literature, and aims to suggest a way to show the impact of EGD on the European wine industry.

As it is presented in Table 4, the impact of soil on the European wine industry is existent and negative, so we can call it indirect impact, since EGD is not participating in the consequences it may arise from. However, there are some obstacles that compromise the performance of wineries, and it is mainly due to soil contamination (high concentrations of cadmium originated from mineral fertilisers and copper widely used in vineyards and orchards), soil compaction, soil sealing (land degradation), soil erosion (by water), among others. In the EGD, soil is under the Farm to Fork strategy, ruled by the CAP, so the wine industry is included in this field as well. Recommendations from the EC could help improve soil's health to preserve biodiversity, reduce the use of pesticides and dangerous chemical fertilisers, and reutilize the water with new tools, methodologies and technologies that could help achieve that.

The impact of the EGD on the European wine industry regarding climate change issues is mixed. On one side, there is an existing impact, which is negative, and it should be marked as "indirect", since EGD strategies are not linked to that outcome. It is caused by the unsustainable use of fossil fuels for transportation, higher pikes of energy demand, heavy glass bottles for storing the wine; and an incredibly big water footprint, deriving in waste and contamination. On the other hand, there is an existing direct impact from the EGD, which could be labelled as "dangerous", since it is due to the negligence or lack of knowledge in the field of Brussels

bureaucrats that pass bills that has nothing to do with the wine industry but goes under the same legislation and affects evenly all industries incorporated on it. It should be applied to all Member States separately, considering each Member States' difficulties and issues to palliate climate change.

EGD sustainability's impact on the European wine industry is existing and forced, but it can't be labelled as a "direct impact". Although the basics of EGD and its reason for existence is because of having a more sustainable continent to live in, according to Ouvrard, S., et. al. (2020), due to the unique feature of the product, wine estate owners and managers need to critically review their business model, since "a sustainable business model serves as a key driver of the competitive advantage of a firm". The biggest obstacle is not from the side of restrictions, but from the educational behaviour of consumers. There is an increasing number of them understanding and demanding sustainability on all businesses, and since there is no transition plan for wineries to scope with the production costs while implementing a sustainable business model, the EGD is making a forced impact on the European wine industry, but indirectly, without entering details of every region and without ruling over the business practices of wineries.

The EGD, more than being a roadmap full of strategies for every sector of the European economy, is backed-up by regulations that set the legal framework on where this Deal is being developed. And by being a regulating system, it is not the extent of polemics. Corsinovi, P., et. al. (2019) research showed that having flexible free-trade agreements with other third countries is helping the end consumer to access a wine with a competitive price, but mostly due to the lack of regulations in those third countries. The European wine for local consumption now is rather expensive than it was 20-30 years ago, so this change in the policy is creating a problematic framework for improvement in this area. The EC should leverage the heavy weight from wineries' shoulders and promote the local consumption of European wine, or by cutting tariffs and barriers on the exports chain.

The impact of the EGD on the profitability of European winegrowers is existing and diffuse, so it could be considered as a direct impact, much closer to being labelled as negative, since the relaxation in certain regulatory frameworks gave free rein to many wineries to overproduce wine, with low added value and very basic quality. If the interpretation of regulations ends up generating a negative impact on the results that are intended to be obtained, this metric cannot be labelled as positive, within the framework of the EGD.

Although the impact is through consumer demands due to sustainability regulations in other European agricultural sectors, the European wine industry feels a direct impact of the EGD strategies through it, so it can be said that there is a direct impact, which is forced and which "forces" to redesign the business model towards a more sustainable one, both economically, socially, and environmentally. That said, one of the most important problems lies in the redesign of the business model of large wineries and vineyards, since it is easier for a small producer to adapt its business model or go bankrupt than for a large market player, whose dimensions in the wine industry are counted in thousands of hectoliters.

Based on these discussions, it can be stated that all of the aforementioned EGD strategies impact the European wine industry from two sides evenly: directly and indirectly. However, the impact is rather negative at the moment of writing this analytical research. Having discussed the research model, the following hypotheses were developed:

Hypothesis 1: The European Green Deal will encourage the adoption of sustainable farming practices in the European wine industry, leading to reduced pesticide and herbicide use. With new tools and technologies the soil will endure and provide richer wines to consumers.

Hypothesis 2: The European Green Deal will provide funding and incentives for the implementation of renewable energy sources in wineries, reducing their carbon footprint. Without land restoration initiatives there is no way the wine industry can cope with climate change, but for that it is necessary that in Brussels bureaucrats have some knowledge in the field.

Hypothesis 3: The European Green Deal will support research and innovation in the European wine industry, leading to the development of new technologies and techniques for sustainable grape growing and wine production. Sustainability plays a poor role in the perception of consumers of wine, and there should be further developments in this regard. The EGD did not design a roadmap for a sustainable transition in an optimum period of time.

Hypothesis 4: The European Green Deal will drive the transition to lightweight and eco-friendly packaging for wine bottles, reducing waste and environmental impact. Flexible regulations in the past led to an overproduction of wine, and the correction of such regulations now is tightening the industry.

Hypothesis 5: The European Green Deal will promote the conversion of vineyards to organic or biodynamic farming methods, resulting in higher-quality and more environmentally-friendly wines. The European wine industry could thrive thanks to the new

Common Agricultural Policy for the period of 2023-2027, implemented with innovative business models in mind, focusing on a mindset of "less is more".

Hypothesis 6: The European Green Deal will enhance the traceability and transparency of the European wine industry, promoting consumer trust and demand for sustainable wines. Consumers are shaping the new business models for the European wine industry, directly impacted by the results achieved in other agricultural sectors of Europe.

3. RESEARCH RESULTS

The purpose of this study is to analyse the impact of the European Green Deal in the European Wine Industry.

The object of the thesis is to explain factors which determine the impact of the European Green Deal in the European Wine Industry.

The aim of this thesis is to analyse the impact of the European Green Deal in the European Wine Industry and define the best techniques and methods to overcome the challenges.

In order to achieve the aim mentioned above, the following objectives were set:

1. To analyse theoretical research and articles to the European Green Deal;
2. To investigate the impact of the European Green Deal on the agriculture;
3. To explain wineries and their job performance definition after implementing the set of proposals of the EGD;
4. To conduct a research about the impact of the European Green Deal in the European Wine Industry and also analyse proposed successful practices, techniques and challenges;
5. To provide conclusions about the impact of the European Green Deal in the European Wine Industry;

3.1. Research Methodology

The analysis unit for this study is an oenologist/winemaker or the general manager of the company with experience in implementing the set of proposals of the European Green Deal, specifically those related to the wine industry. In this research the interviews will be conducted with 3 informants. (all of them from different regions of Spain: La Palma island (Canary Islands), Penedès (Catalonia) and Utiel-Requena (Valencia)).

Purposive Sampling and Sampling frame

The purposive sampling allows to collect the information from people who are highly experienced in implementing the set of proposals of the EGD and defining its impact on the wineries they work at. A crucial aspect was to find the people who made organisational decisions of implementing sustainable practices and analysed how it affected their financial, working and

environmental aspects. In case of the problem analysis mentioned above, the best data could be collected by processing purposeful sampling.

Criteria for Inclusion

1. The chosen managers have a minimum of ten years of experience in working on the position of the company implementing the proposals set in the EGD way before it was presented.
2. All of the informants are currently working in the companies that apply these sets of proposals and currently occupy managerial positions.
3. All of the informants are personally involved in sustainability practices and are clearly and fully aware of all processes connected to it.

Data Collection

The interviews will be conducted by doing a voice call or through an official email. Each of them will be recorded with prior informant approval. After the interviews, audio and email files will be transcribed, analysed, and coded accordingly to the aim, objectives and hypothesis represented in the research before. The final result will provide actual data for further research.

Interview Protocol

The interview questions are prepared in such a way to get all the relevant information about the wineries' insights on the implementation of the set of proposals stated in the EGD. Due to the innovative and yet not so deeply defined topic, it would not be valuable to have very specific and narrow questions, because it would not allow informants to enrich the scope of the answer and add more details to it.

Table 5. Interview questions and their reasoning.

	Question	Question Reasoning
1	How long have you been working in your position and has your	To collect general information about the employee. To find out how long the interviewee has

	company started to adopt the set of proposals set out in the EGD? Supporting questions: a) What is the size of your company? b) Did the idea of implementing the EGD proposals receive the support of all the members of your team?	been with the company and whether he/she has been involved in management decisions regarding the EGD application.
2	What kind of activities does the company carry out to promote the EGD proposals? Supporting questions: a) Are these activities related to or included in the vision of the company? b) Are these activities related to or included in the mission of the company?	To understand how exactly the company practises the objectives of the EGD and how it relates to its visions and objectives.
3	What main steps and decisions did the company have to take in order to start implementing the EGD proposals? Supporting questions:	To collect information for hypotheses and conclusions. Understand how the company started implementing the EGD, what steps and challenges it had to overcome.

	a) What was the main reason for the company to start implementing these proposals? b) At which level of management was the decision taken? c) Has the decision making process changed after starting to implement the EGD proposals?	
4	Has the EGD/CAP affected the financial results of your company? Supporting questions: a) Overall has it been good or bad? b) Is it expensive for your company to implement the EGD proposals?	This question is necessary to answer one of the main objectives of the thesis.
5	Has the EGD affected the work performance of employees? Supporting questions: a) Has it been good or bad? b) Is EGD one of the motivating factors in the workplace?	To answer one of the objectives of the thesis and understand how the EGD affects employees and what kind of impact it has on the workplace.
6	Is the company developing partnerships in line with other companies' EGD activities?	To collect information to analyse the 2nd hypothesis. To answer and understand which processes the EGD applies.

	Supporting questions: a) How important is the implementation of EGD activities for the future partnership with the company? b) Does the EGD cover the whole production process or does it only apply to specific activities?	
7	How does the EGD determine the success of the company? How important is social performance for the success of the company? Supporting questions: a) Does the EGD lead to financial success?	To collect information to analyse the third hypothesis. To understand how successful the EGD practices proceed. To answer one of the main objectives of the thesis.
8	Does the EGD play an important role in developing competitive advantages over competitors? Supporting questions: a) Does the EGD create a brand image? b) Does the EGD determine the behaviour of customers to stay loyal to the brand?	To collect information to analyse the main objectives of the thesis.
9	What were the main challenges in the process of implementing the EGD?	To know if it is worthwhile to implement the EGD and to face

	Supporting questions: a) Do you think the success rate is worth all the difficulties faced by companies starting their activity with the EGD?	all the difficulties and challenges it entails.
10	What would be your suggestions for start-ups or companies wishing to apply the EGD practices?	To find out what are the suggestions and advice for companies wishing to enter the wine industry in the future, with the EGD as a reference.

Table 5. Created by the author.

Data Coding and Analysis

After collecting all the audio recordings and transcribing them into plain text, and also analysing and summarising the email answers, the next step was to find valuable thoughts from the interview and highlight them. The following step was to find a correlation of the interview answers with both hypothesis and main objectives of the research, which made it easier to group important thoughts together. After having all the main insights grouped and tagged, the details for each of the interview answers were defined and quoted in a way to prepare the results part. The most important part of this process was the clarity of the informants, so no additional communication was required when transcribing/summarising.

Researched Informants

A total of 3 informants were interviewed. All of the informants are very familiar with the European Green Deal, have many years of experience working in their field and in implementing sustainable winemaking practices. All of the informants are from the wine business sector and represent different wine regions of Spain. That fact made it more interesting to understand how the EGD proposals can be applied in different environments.

Informant 001

Informant 001 is a medical pharmacist from the University of Barcelona and has a degree in Oenology from the University of Tarragona. The only winery she has worked for is her husband's family winery. She has been working there for more than 20 years and has been a pioneer in the implementation of biodynamic wines for which the winery is now world renowned. She has also been awarded as the winemaker of the year 2024 by the prestigious English wine critic and Master of Wine, Tim Atkin.

Informant 002

Informant 002 is a Specialist Technician in Viticulture and Enotechnics and Cellular Mycology, President of the Association of Winemakers of the Canary Islands since December 2010 and Winemaker of several wineries in the Canary Islands since 1989. He has more than 35 years of experience in the Spanish wine sector and has always been at the forefront of all sustainable processes in the wine industry, being a pioneer in implementing sustainable practices in the companies he has worked for.

Informant 003

Informant 003 is an oenologist with more than 15 years of experience in the sector. He currently holds the position of President of the Utiel-Requena Wine Route, combining this job with that of oenologist of the winery he represents. One of his greatest merits is being the main oenologist of one of the 20 wineries with the highest quality designation (Vino de Pago), among the more than 4000 wineries in Spain today.

3.2. Research Data Analysis and Evaluation of the Research Results

In order to explain confirmation or rejection of the six hypotheses, three interviews and customer survey forms were used. It is worth mentioning that the amount of information was enormous, but in order to deliver a concise and summarised answer to approve or reject the hypotheses, the results obtained are the following:

Hypothesis 1: The European Green Deal will encourage the adoption of sustainable farming practices in the European wine industry, leading to reduced pesticide and herbicide use. With new tools and technologies the soil will endure and provide richer wines to consumers.

All informants agree that sustainable ploughing practices are important to preserve soil quality in wine production. Limited or no use of pesticides, recycling of water used, as well as other preservation mechanisms at harvest time are aspects that all three informants take for granted and apply in their daily work.

Hypothesis 2: The European Green Deal will provide funding and incentives for the implementation of renewable energy sources in wineries, reducing their carbon footprint. Without land restoration initiatives there is no way the wine industry can cope with climate change, but for that it is necessary that in Brussels bureaucrats have some knowledge in the field.

None of the informants described in detail the receipt of funds from the European Union for their activities, as many of them were being implemented before the entry into force of the European Green Deal. However, there was mention by Informant 001 of how costly organic and biodynamic certificates are, as well as the renewal of the fleet of vehicles needed to carry out such tasks under this framework.

Hypothesis 3: The European Green Deal will support research and innovation in the European wine industry, leading to the development of new technologies and techniques for sustainable grape growing and wine production. Sustainability plays a poor role in the perception of consumers of wine, and there should be further developments in this regard. The EGD did not design a roadmap for a sustainable transition in an optimum period of time.

The tasks carried out by Informant 003 in his vineyard give some support to this hypothesis, given that the current empirical evidence regarding the preservation of water in the plough has been one of the changes that his winery has implemented, giving it the recognition as a quality standard that it enjoys today.

Hypothesis 4: The European Green Deal will drive the transition to lightweight and eco-friendly packaging for wine bottles, reducing waste and environmental impact. Flexible regulations in the past led to an overproduction of wine, and the correction of such regulations now is tightening the industry.

All informants agree on getting good technical advice to carry out the sustainable transition in the wine industry, otherwise it will result in higher production costs (admitted by Informant 002 and Informant 003) that smaller vineyards will not be able to bear.

Hypothesis 5: The European Green Deal will promote the conversion of vineyards to organic or biodynamic farming methods, resulting in higher-quality and more environmentally-friendly wines. The European wine industry could thrive thanks to the new Common Agricultural Policy for the period of 2023-2027, implemented with innovative business models in mind, focusing on a mindset of "less is more".

The quality of the wines is a factor totally independent of the harvesting methods of a vineyard. However, for them to be environmentally friendly they do need to be tied to certain guidelines to which none of the three informants objected. Informant 001 mentions that her winery has had sustainable practices and biodynamic and organic wine certifications for more than 20 years. Informant 002 is a pioneer in this field in his region, long before the European Green Deal was even a topic on the table, and Informant 003 can boast of being among the top 1% of all wineries in Spain in quality and environmental certification.

Hypothesis 6: The European Green Deal will enhance the traceability and transparency of the European wine industry, promoting consumer trust and demand for sustainable wines. Consumers are shaping the new business models for the European wine industry, directly impacted by the results achieved in other agricultural sectors of Europe.

Informant 003 has his doubts on this issue, not believing that the European Green Deal will be a panacea in terms of consumer behaviour and their attitude towards wine. On the contrary, Informants 001 and 002 have a more positive outlook on this issue, arguing that their wineries have a more loyal and committed customer base for the choices they can make. They do not see the European Green Deal as an obstacle to further increasing their number of consumers.

CONCLUSIONS

To conclude this Master's thesis, an analysis of theoretical research and articles (relevant to the European wine industry) was conducted. The information found lead to conclusions that the European Green Deal has both a positive and negative impact on the European wine industry. The data was gathered by using the materials written mostly during the last five years, which means that this topic hasn't been researched and discussed as much as it should. Nevertheless, the topic is progressing rapidly and further research is required and advised. After analysing the theoretical research and articles about the impact of the European Green Deal on the European wine industry, it can be summarised that:

1. The European Green Deal's focus on sustainability, renewable energy, climate goals, and agricultural practices directly intersects with the European wine industry. It has the potential to influence the profitability of European wineries through regulatory changes, the promotion of sustainable soil management practices, the encouragement of circular economy principles adoption, and the incentivization of renewable energy investments.

To analyse the empirical research level regarding the EGD and the European wine industry has been discussed. After analysing several works connected the main aspects of the EGD, we can assume that:

2. The EGD through its Farm to Fork strategy and regulated through the Common Agricultural Policy can help vineyards to make better use of resources for winemaking, such as vine care, good soil health, the conscious use of fertilisers, the fight against climate change through improved wine production practices, a logical use of subsidies aimed at alleviating the geographical disadvantages that a vineyard may encounter, the good management of the natural resources provided for each vineyard. However, regulations, profitability and business models are directly impacted by the EGD in a negative way, mostly due to the misinterpretation of goals set between the EC and the European wine industry.

After having evaluated the results of theoretical and empirical research, a formulation of the research model of the impact of the EGD on the European wine industry was presented. A total of 3 informants have been interviewed in order to conduct the research about the impact of the European Green Deal on the European wine industry, and show the proposals implementation with its approaches and challenges. All informants have plenty of experience in working for

different Spanish wineries implementing the EGD proposals. This fact allowed them to express their opinion and thoughts from different perspectives and with their own regions in mind.

In order to investigate the aim and answer the objectives of the thesis, a conceptual model has been created and 6 hypotheses were suggested. The conducted interviews results lead to the partial confirmation of all 6 hypotheses in terms of all parts of the conceptual model starting from the basic managerial decisions, following with importance of regulations in accordance with the EGD and finally, resulting in success in profitability.

After analysing the results of interviews and survey form, we can assume that:

The Deal is very recent, many industries (not only the wine industry) are adapting to it, especially taking into account the consequences of the COVID-19 pandemic and the successive wars in Eastern Europe and the Middle East. However, the series of proposals put forward have both a positive and negative effect, with the magnitude of the effects being negative in the short term, but positive in the long term. At the same time, investments in the sector are not what wineries expect compared to the bureaucratic burden these proposals present, and access to biodynamic and organic certification results in a significant increase in wineries' accounts, negatively influencing their revenues.

From the 6 hypotheses presented, the following results were obtained:

1. Hypothesis 1: Positive impact, approved by the majority of the informants.
2. Hypothesis 2: Negative impact, rejected by the majority of the informants.
3. Hypothesis 3: Positive impact, approved by the majority of the informants.
4. Hypothesis 4: Negative impact, rejected by the majority of the informants.
5. Hypothesis 5: Positive impact, approved by the majority of the informants.
6. Hypothesis 6: Positive impact, approved by the majority of the informants.

Overall, we can conclude, that The European Green Deal is necessary, but just as this regulatory framework marks a before and after in the conduct of European business models, it should also be decentralised and applied locally, first by country, then by region, and finally by locality, offering sufficient financial support to cope with rising production costs and the purchase of new machinery, as well as reviewing the bureaucratic hurdles to implementing the proposals.

RECOMMENDATIONS

Get your bearings, read and build your ideals

While there are aspects in the European Green Deal that are not binding, such as various strategies and roadmaps that an individual can take, binding aspects such as the legislative order, European regulations and directives as well as various implementation mechanisms of the policies included in the Deal should not be ignored, or what is more, are mandatory. Therefore, it is important to orient oneself on the subject and to read the Deal's principles in order to build ideals and an opinion that will enable the exercise of sustainable business in a Europe with very ambitious goals, but which can be implemented.

Include the EGD proposals in the company's mission and vision

The proposals stipulated in the EGD should be part of the company's mission and vision, to help build a better wine community and unite consumers in a single space where appreciation for the environment, sustainable business practices and a love for wine in its most natural and least industrial form possible are seen and felt.

Facilitate an EGD policy framework within the company for all employees

While the EGD proposals included in the company's mission and vision amplify the theoretical framework, providing a binding policy framework for all employees is essential to turn words into action, to make everyone aware of it and to make it an obvious daily and routine thing to understand.

Prioritise the most crucial aspects of the EGD

Not all binding aspects of the EGD are urgently needed, so one way to reduce the burden of this new process would be to prioritise the most important guidelines for the chosen business model. It is important to prioritise the most crucial aspects of the EGD and thus pick the low-hanging-fruit from the tree that will give the business a boost and then allow the other policies included in the Deal to be expanded.

Be patient, it is a long-term process

Although time is short to achieve the targets set by the European Commission and stipulated in the European Green Deal for the continent to become a zero-emission continent by 2050, once you start convinced that there will be no turning back, you will already be taking a very relevant step, so being patient and understanding that to see the first fruits of this work will require time and that it is a long-term process is more than crucial. This will also help to conceive the EGD policies not only as a directive to be followed, but may end up becoming a philosophy of life, which expands to the local wine community, to your company and to your customers.

Recommendations for future research

As various countries and companies implement the policies of the European Green Deal, more information on this topic will be added, allowing the research framework to be expanded and allowing for further research to complement this and other work. The results on environmental policies in the wine industry are yet to be seen, bearing in mind that the EGD was launched in 2019, and the following three years were marked by the hiatus of the COVID-19 pandemic and then the consequences of successive geopolitical conflicts in Eastern Europe and the Middle East.

SUMMARY

SANTRAUKA

Rimantas Leonavičius (2024). Europos žaliojo susitarimo poveikis Europos vyno pramonei. Magistro darbo vadovas: daktaras Dalia Štreimikienė. Parengtas magistro darbas: Kaunas, 2024. Magistro darbo apimtis: 60 psl. Magistro darbo lentelių skaičius – 5. Magistro darbo paveikslų skaičius – 1. Literatūros sąrašas – 48 šaltiniai.

Trumpas magistro darbo aprašymas: Europos žaliasis susitarimas yra 2019 m. Europos Komisijos pristatytas planas, kuriuo siekiama, kad Europa iki 2050 m. taptų klimatui neutraliu žemynu. Vienas iš pagrindinių tikslų apima ir Europos žemės ūkį, o dar tiksliau – vyno pramonę. Žalieji reguliavimai tampa vis populiaresni kiekvienoje šalyje, turinčioje skirtingą ekonomikos išsivystymo lygį bei ekonomikos struktūrą, bet tai ypatingai pasireiškia Europoje, kur tai yra sutapatinama su sėkminga žalia verslo plėtra. Tačiau vis tik, pats Europos žaliasis susitarimas dar nėra visiškai subrendęs verslo savireguliacijos metodas, ir nėra tiksliai išnagrinėta, kurie veiksniai, ištekliai, metodai ir verslo modeliai padės Europos vyno pramonei išsivystyti.

Magistro darbo uždaviniai: Darbo objektas yra nustatyti, kokį poveikį daro Europos žaliasis susitarimas Europos vyno pramonei, daugiausia dėmesio skiriant Ispanijos atvejui.

Šio baigiamojo darbo tikslas – ištirti Europos žaliojo susitarimo poveikį Europos vyno pramonei.

Darbo tikslui pasiekti keliami šie uždaviniai: išanalizuoti EŽS sąvoką ir jos strategijas; aprašyti Europos vyno pramonę ir jos veikimo principus; išnagrinėti EŽS ir Europos vyno pramonės ryšį; išanalizuoti EŽS ir Europos vyno pramonės empirinių tyrimų lygį; įvertinus teorinių ir empirinių tyrimų rezultatus, suformuluoti EŽS poveikio Europos vyno pramonei tyrimo modelį; atlikti empirinį EŽS poveikio Europos vyno pramonei tyrimų modelių vertinimą, remiantis Ispanijos atvejo tyrimu, ir nustatyti, ko reikalauja įmonės.

Magistro darbe naudojami metodai: Mokslinės literatūros analizė ir sintezė bei jos sisteminimas ir apibendrinimas. Pats empirinis tyrimas yra atliekamas, naudojant kokybinį tyrimą atlikus tris informatorių interviu, struktūrizuotų klausimynų pagalba.

Atlikti tyrimai ir gauti rezultatai: Apklaustieji pripažino teigiamą Europos žaliojo susitarimo poveikį Europos vyno pramonei, tačiau nerimą kėlė našta, su kuria įmonėms tenka susidurti pasiūlymų įgyvendinimo pradžioje, o į tai investuoti nori ne visi vyno sektoriaus atstovai.

Pagrindinė išvada: Europos žaliojo susitarimo poveikis Europos vyno pramonei yra iš dalies teigiamas, bet tam, kad poveikis ir toliau liktų teigiamas būtina pačių iniciatorių (Europos Komisijos) pagalbos pirmuose etapuose, kuomet finansinė ir teisinė parama labiausiai reikalinga, ypač mažesnėms vyninėms, kurios kitaip negalėtų konkuruoti su savo krašto didesnėmis vyninėmis, juolab su išorinio pasaulio vyninėmis. Be to, Europos žaliojo susitarimo pagrindinės tezės turėtų būti įtrauktos į vyninių misiją ir viziją, kad jos implementavimas netaptų našta, o būtų tiesiog dar viena proceso dalis.

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LIST OF DATA SOURCES

1. Vineyards in the EU - statistics
2. EUROPEAN FARMING
3. CEEV reports ‘impressive and positive’ impact of wine sector in EU
4. EU wine sector
5. STATE OF THE WORLD VINE AND WINE SECTOR IN 2022
6. Consumption of wine in European countries in 2022
7. Per capita wine consumption in the European Union from 2016 to 2023
8. Farm to Fork strategy
9. Wine Consumption by Country
10. WINE CONSUMPTION IN EUROPE 2019
11. Número de bodegas en España a 1 de enero de 2022
12. The World’s vineyard surface in 2020 and the split by country, an analysis
13. Global Wine Markets: 1961 to 2009: a statistical compendium
14. EU rules for organic wine production
15. EU rules for organic wine production
16. EU’s Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system

ANNEX

Annex 1

Excerpt from Interview transcription with Informant 001

1. **Researcher**: How long have you been working in your position and has your company started to adopt the set of proposals set out in the EGD?
   Informant 001: 21 years, our company has been adopting environmentally friendly policies for 23 years, such as organic farming and the use of herds in the vineyards.

- **Researcher**: What is the size of your company?
- **Informant 001**: It is an estate with 200 ha of vineyards and a total of 55 workers.

- **Researcher**: Did the idea of implementing the EGD proposals receive the support of all the members of your team?
- **Informant 001**: The decision was made unanimously by the family that owns the project. So yes, ecological philosophy is part of our way of understanding wine.

2. **Researcher**: What kind of activities does the company carry out to promote the EGD proposals?
   Informant 001:
   - Organic farming
   - Biodynamic agriculture
   - Incorporation of hybrid and electric vehicles in the company
   - Reducing the carbon footprint of wines

- **Researcher**: Are these activities related to or included in the vision of the company?
- **Informant 001**: Yes, they are included in the vision of the company.

- **Researcher**: Are these activities related to or included in the mission of the company?

- **Informant 001**: Yes, they are also included in the mission of the company.

3. **Researcher**: What main steps and decisions did the company have to take in order to start implementing the EGD proposals?

Informant 001: It was a natural conviction from the very beginning that environmentally friendly agriculture should be carried out.

- **Researcher**: What was the main reason for the company to start implementing these proposals?
- **Informant 001**: Personal conviction of the owners.

- **Researcher**: At which level of management was the decision taken?
- **Informant 001**: At the ownership level.

- **Researcher**: Has the decision making process changed after starting to implement the EGD proposals?
- **Informant 001**: No, it didn't change.

4. **Researcher**: Has the EGD/CAP affected the financial results of your company?

Informant 001: We believe that the use of organic and biodynamic farming is good for the image of the winery and the sales of the wines.

- **Researcher**: So overall has it been good or bad?
- **Informant 001**: Good

- **Researcher**: Is it expensive for your company to implement the EGD proposals?
- **Informant 001**: Organic and biodynamic certification costs are expensive. Vehicle fleet renewal is also expensive. The increased administrative control resulting from EGD is a serious extra burden for small and medium sized farms, so in a way it is expensive, yes.

5. **Researcher**: Has the EGD affected the work performance of employees?
   Informant 001: No, it has not affected the performance.

- **Researcher**: Has it been good or bad?
- **Informant 001**: Neutral, with respect to job performance.

- **Researcher**: Is EGD one of the motivating factors in the workplace?
- **Informant 001**: Yes, we can state that. The employees share the enthusiasm for sustainable agriculture, it is one of the hallmarks of the winery.

6. **Researcher**: Is the company developing partnerships in line with other companies' EGD activities?
   Informant 001: Not specifically, no.

- **Researcher**: How important is the implementation of EGD activities for the future partnership with the company?
- **Informant 001**: It is really important.

- **Researcher**: Does the EGD cover the whole production process or does it only apply to specific activities?
- **Informant 001**: Yes, it does cover the whole production process.

7. **Researcher**: How does the EGD determine the success of the company? How important is social performance for the success of the company?

Informant 001: The higher the social awareness of healthy food, the more successful the winery will be.

- **Researcher**: Does the EGD lead to financial success?
- **Informant 001**: Not on its own, no, it is only a complementary factor.

8. **Researcher**: Does the EGD play an important role in developing competitive advantages over competitors?

   Informant 001: Not necessarily.

- **Researcher**: Does the EGD create a brand image?
- **Informant 001**: In some respects yes, organic farming makes a difference.

- **Researcher**: Does the EGD determine the behaviour of customers to stay loyal to the brand?
- **Informant 001**: There are customers who are looking for organic or biodynamic products, so yes.

9. **Researcher**: What were the main challenges in the process of implementing the EGD?

Informant 001: There is a very important administrative burden, which requires specific manpower in several fields linked to agriculture. The agricultural activity should be focused on the field and not on the offices, in this aspect the EGD is an important burden.

- **Researcher**: Do you think the success rate is worth all the difficulties faced by companies starting their activity with the EGD?
- **Informant 001**: It does pay off if you are fully convinced of what you are doing.

10. **Researcher**: What would be your suggestions for start-ups or companies wishing to apply the EGD practices?

Informant 001: You have to do it out of personal conviction and alignment with your own ideas. You have to prepare yourself administratively as it is a major burden.