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Beyond Business as Usual: Portuguese Enterprises In the Age of Sustainability Megatrends

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Megatrends

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ABSTRACT

The unprecedented combination of social, environmental, and economic challenges, known as Sustainability Megatrends, has created comprehensive and sustainability-oriented changes across society. These megatrends are significantly impacting the political, economic, and environmental dimensions and are expected to have lasting effects in the coming decades. As a result, organisations face the increasing need to adapt and cope with these transformative forces to remain relevant and competitive. This study focuses on Portuguese organisations and their response to sustainability megatrends. A qualitative research methodology, followed by a set of secondary data of 101 interviews, revealed that Megatrends hold great relevance for Portuguese organisations. While the majority of organisations are currently implementing sustainable practices in their business strategy and adapting production to become more sustainable, It is evident that there is still progress to be made in order to fully embrace sustainability into their business model.

Keywords: Sustainability, Megatrends, Sustainable business model, Triple Bottom Line, Circular Economy, Portuguese Organisations

JEL Classification: M10, M14

RESUMO

A combinação sem precedentes de desafios sociais, ambientais e económicos, conhecidos como Megatendências da Sustentabilidade, tem exigido mudanças abrangentes e orientadas para a sustentabilidade em toda a sociedade. Essas megatendências estão a impactar significativamente as dimensões políticas, económicas e ambientais e espera-se que tenham efeitos duradouros nas próximas décadas. Como resultado, as organizações enfrentam a crescente necessidade de se adaptar e lidar com essas forças transformadoras para se manterem relevantes e competitivas. Este estudo concentra-se em organizações portuguesas e as suas respostas às megatendências da sustentabilidade. Uma metodologia de pesquisa qualitativa, seguida de um conjunto de dados secundários de 101 entrevistas, revelou que as Megatendências têm grande relevância para as organizações portuguesas. Embora a maioria das organizações esteja atualmente a implementar práticas sustentáveis na sua estratégia empresarial e a adaptar a sua produção para se tornar mais sustentável, é evidente que ainda há progresso a ser feito para incorporar totalmente a sustentabilidade nos seus modelos de negócios.

Palavras-chave: Sustentabilidade, Megatendências, Modelo de negócio sustentável, Triple Bottom Line, Economia Circular, Organizações Portuguesas

Classificação JEL: M10, M14

Table of Contents

1. Introduction	1
2. Literature Review	2
2.1 Sustainability Megatrends	2
2.2 Sustainability Performance Frameworks	3
2.3 Circular Economy	6
2.4 Overview of Sustainable Development in Portugal	7
3. Methodology	9
4. Results and Discussions	11
4.1 Are Sustainability Megatrends relevant for Portuguese Organisations?	11
4.2 Have Organisations adopted Sustainability measures?	14
4.3 Have Organisations made their production more Sustainable?	18
4.4 What are the major threats and opportunities for the future?	21
5. Findings and Contributions	25
6. Conclusions	27
7. Limitations	29
8. Bibliography	31

Table of Tables

Table 1. Research instruments and objectives	10
Table 2. Bigram	16
Table 3. Trigram	17

Table of Figures

Figure 1. Biggest environmental sustainability issues already impacting or threatening to impact organisations.....	3
Figure 2. Word Frequency List of RQ1	11
Figure 3. Word Cloud of RQ1	11
Figure 4. Word Association of "Megatrends"	12
Figure 5. Hierarchical Cluster pt2.	13
Figure 6. Hierarchical Cluster pt1.	13
Figure 7. Word Frequency List of RQ2.....	14
Figure 8. Word Cloud of RQ2	14
Figure 9. Word Frequency List of RQ3.....	18
Figure 10. Word Cloud of RQ3.....	18
Figure 11. Word Association of "New".....	20
Figure 12. Word Association of "Product"	20
Figure 13. Co-occurrence network	21

1. Introduction

Due to the unprecedented combination of social, environmental, and economic challenges, ranging from climate change, resource scarcity, social inequalities, etc., comprehensive and sustainability-oriented changes in central areas of society are needed (Gaudig et. al., 2021). These challenges can also be called Megatrends, which can be defined as a significant impact on the political, economic, and environmental dimensions that will impact our way of living in the following decades (Ramos & Isfan, 2020).

Organisations are expected to cope with an increasing number of megatrends in the near future, many of which are already having an impact (Linthorst & de Waal, 2020). These megatrends are triggering exponential changes in the way organisations operate and thus, businesses that misjudge the dangers related to these megatrends and fail to adjust may suffer serious long-term consequences (Waard, 2022).

The necessity to make this study comes from two fronts: firstly, sustainability has become increasingly critical for organisations to remain relevant and competitive in today's world. Therefore, it should be an integral part of developing corporate strategy, and in addition, it presents opportunities for future growth (White, 2009). The second one, as was mentioned at a European Council meeting, Portugal is one of the countries most affected by climate change. The country is showing a tendency towards more extreme weather events, such as heat waves, droughts, flooding, and wildfires that have gigantic repercussions on the population, the business sector, and the economy (Ramos & Isfan, 2020). Therefore, it is of the utmost importance to observe if sustainable behaviour is really being integrated into Portuguese organisations.

The aim of this research is to assess what type of sustainable measures Portuguese organisations are using to face Sustainability Megatrends and, additionally, explore what are the biggest threats and opportunities for the future of these organisations. Having said this, the structure of this research is divided into five main chapters: (1) Literature Review; (2) Methodology; (3) Discussion and findings, (4) Conclusions, and (5) Limitations. The literature review enables a theoretical background of the main topics relevant to this research – sustainability megatrends and organisational sustainability. As for the methodology, a qualitative analysis was carried out in the form of interviews, retrieved from secondary data, encompassing multiple personalities from numerous sectors of Portuguese public life. To that

data, multiple text mining analyses were used in the Discussion and findings chapter, utilizing the KH Coder 3 software, and were discussed with theoretical knowledge exhibited in the literature review chapter. Lastly, in the conclusions and limitations chapter, the main results from the analysis will be drawn and the shortcomings of this analysis will be discussed.

2. Literature Review

2.1 Sustainability Megatrends

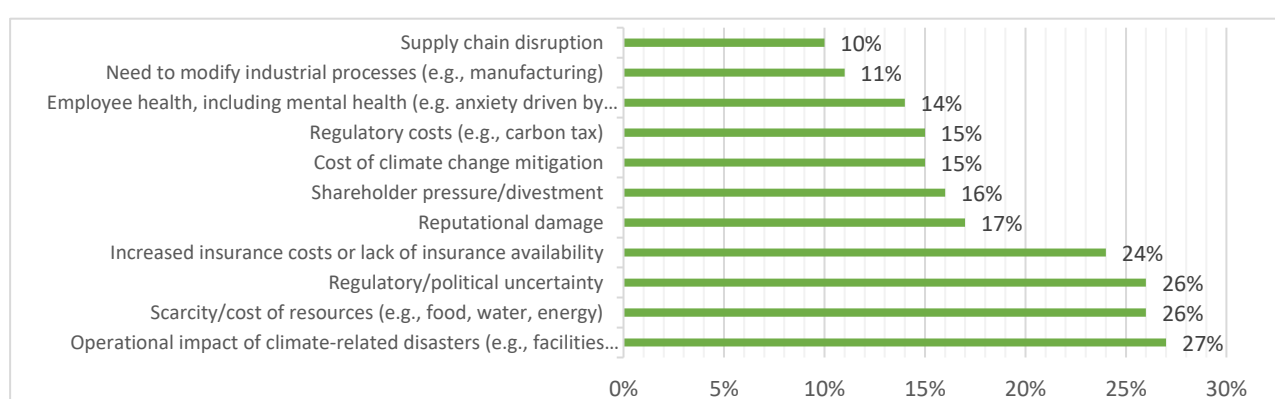
Sustainability has become a major theme all over the world and despite being used very often in the current days, the movement around sustainability started decades ago, with Meadows et al. (1972) pointing out the urgent need to change in an infamous book called “The Limits to Growth”. Numerous definitions of “sustainability” have been elaborated, but one of the most widely used definitions has been developed by the World Commission on Environment and Development (WCED) (Seyler, 2020). Brundtland, G. (1987) defines sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”. Therefore, for the concept of sustainability to be relevant, it must imply a notion of durability, stability, and eternalness (Baumgartner, 2014).

In the current days, sustainability-oriented changes in central areas of society, especially in organisations, are needed due to the prevailing environmental, social, and economic challenges worldwide. These challenges, also named Megatrends, can be defined as a significant impact on the political, economic, and environmental dimensions that will impact our way of living in the following decades (Ramos & Isfan, 2020).

Numerous Megatrends have been acknowledged among academia, and although most of them identify the same type of trends, there is no universally accepted number of trends. Nevertheless, KPMG (2012) conducted a report related to the ten sustainability Megatrends that will impact every business in the next 20 years and it combines the most mentioned trends that were observed during this literature review. The Megatrends are: climate change, change of energy and fuel, material resource scarcity, water scarcity, population growth, urbanization, disparities of wealth, food security, ecosystem decline, and deforestation. Out of all the mentioned Megatrends, climate change stands as a paramount that overlaps and/or influences other megatrends (Retief et. al., 2016). Consequently, the Intergovernmental Panel on Climate Change (IPCC) (2022) and the World Economic Forum (WEF) (2021) both argue that climate change is the most significant long-term risk affecting our planet.

Deloitte (2021) stated that the operational impacts of climate events are affecting more than one in four organisations. According to Figure 1, the most noticed environmental issues already impacting or threatening to impact all organisations are operational impacts of climate-related events, which causes disruption on business models, facilities, supply chains, the workforce and more. It is followed by resource scarcity/cost, due to both environmental and human causes, and regulatory/political uncertainty, the latter resulting from the increased pressure by governments to enforce organisations to adopt sustainable measures (Linthorst & de Waal, 2020).

Figure 1. Biggest environmental sustainability issues already impacting or threatening to impact organisations



Source - Deloitte 2021 Climate Check: Business' Views on Environmental Sustainability

It should be highlighted that the mentioned megatrends shouldn't be interpreted as independent or mutually exclusive forces (Linthorst & Waal, 2020). They function as an intricate and unpredictable system that systematically feeds and amplifies from the effects of others. For organisations to minimize their negative impact and harness opportunities in the future, they must comprehend the way Megatrends function and how they can impact their own organisation (KPMG, 2012); enhance and continuously innovate their production techniques and resource usage and formulate strategic initiatives to increase their sustainability in terms of balancing economic, environmental, and social factors (Elkington, 2018).

2.2 Sustainability Performance Frameworks

Sustainability performance may be defined as a company's performance across all dimensions of corporate sustainability (Schaltegger & Wagner, 2006), going beyond the realm of the organisation and taking into account the impact on all stakeholders (i.e., any individual, group, or item that can be affected by an organisation's decisions) (Fiksel et.al, 1999).

John Elkington coined the term, “Triple Bottom Line” (TBL) in 1994, and it is still, to this date, one of the most relevant sustainability performance frameworks. In simple terms, the TBL, which also can be known as the 3 P’s (People, Planet, and Profit), refers to the holistic method of measuring the economic, environmental, and social impact that an organisation has on all its stakeholders, including employees, customers, suppliers, community, and environment. The economic dimension focuses on the impact of the organisation’s business practices on the economic system, the social dimension focuses on conducting beneficial and fair business practices to the labour, human capital and the community, and the environmental line refers to engaging in practices that don’t compromise the environmental resources for future generations (Elkington, 1997).

This concept made a huge progress in the way organisations operated, changing the dominant view that they ought to be responsible only for their financial performance (Lawler, 2014), to assuming that value creation resulted when evaluating their performance in a broader aspect (Elkington, 2006). This framework was the fruit of the growing awareness of the impact that organisations have on multiple sustainability megatrends (Guest, 2010), that inevitably changed society’s expectations. Organisations started being held accountable for their impact on the macro environment by society at large (Burritt & Schaltegger, 2010), which helped increase emphasis on sustainable practices and made TBL a norm for organisations.

The use of this framework doesn’t have to mean a drop in financial performance by the businesses. Linnenluecke & Griffiths (2010) showed empirical evidence that companies that engage with environmental measures can improve performance and promote sustainable innovations. In fact, many authors agree with this viewpoint. White (2009) stated that sustainable practices have become a responsibility for companies, but it also presents opportunities for their future growth and Gimenez et al. (2012) suggested that a company’s involvement in social and environmental responsibility is necessary and can result in financial gains.

Given that organisations are increasingly concerned with environmental and social issues and the TBL is a well-accepted framework, one could assume that its’ use and management should be successful, although in practice that is not the case. There tends to be ineffective management of the social and environmental dimensions (Baumgartner, 2014), and often decisions regarding these dimensions are taken independently from corporate strategy, conducted in isolation (Silvestre & Fonseca, 2020). Not only that, but Winter & Knemeyer

(2013) also mentioned in their research that the social and environmental bottom line are often overtaken and sometimes forgotten when compared to the economic dimension. Therefore, there seems to be a lack of implementation of the environmental and social responsibility programs in the overall strategy of organisations. Fonseca, L. M. (2015) argued that for organisations to succeed in the implementation of the mentioned dimensions, they must have a better understanding of their employees and overall community satisfaction and how systematically sustainability within the organisation is identified and managed. In other words, for organisations to successfully implement, manage, and monitor environmental and social measures, they must undergo a cultural and transformational change (Linnenluecke & Griffiths, 2010).

Many authors are now recognizing the need to enhance the holistic framework of the TBL by granting more prominence to the social and environmental dimensions. Some authors have proposed the Quadruple and Quintuple bottom line as potential successors to the TBL. The Quadruple bottom line introduces a fourth dimension that focuses on employee happiness (Fonseca, 2015; Lawler, 2014). This framework ensures the distinction between an organisation's impact on employees and society, which in the TBL was combined, diminishing the significance of how employees were treated and often resulting in a lack of emphasis on cultural organisational development (Lawler, 2014). Alternatively, the Quintuple bottom line advocates for the inclusion of two additional dimensions: culture and ethics (Avi, 2022). This theory underscores the importance of embedding a culture of sustainability at both the corporate and personal levels. Without such integration, any framework aiming to promote sustainable and/or social development would lack practical implementation within organisations (Avi, 2022).

The implementation of sustainability performance frameworks in organisations has become widespread, but the methods used to measure them vary significantly. Proponents who have attempted to apply frameworks like the TBL have encountered numerous challenges in identifying suitable data for the framework's dimensions and creating a comprehensive yet meaningful index (Slaper & Hall, 2011). In essence, there is no universally accepted standard method for calculating sustainable performance frameworks. It ultimately falls upon each organisation to select a set of measures that are relevant to their specific context (Slaper & Hall, 2011). Consequently, there is a multitude of indexes that organisations utilize to gauge sustainable performance, including the Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC), World Economic Forum (WEF), Sustainable

Development Goals (SDG), among others (BCSD & Coelho, 2021). This diversity can be seen as both positive, as it allows for adaptability to an organisation's unique characteristics, and negative, as it lacks guidance and mandatory provision of meaningful information (Loviscek, 2021). Choosing from the wide range of available indexes can pose a challenge (BCSD & Coelho, 2021).

2.3 Circular Economy

With the aim of adopting a more sustainable behaviour and combating Sustainability Megatrends, the concept of Circular Economy (CE) arises as an alternative to the traditional linear economy system, “take, produce, use and dispose”, in which resources are harvested, utilized in the production of goods, consumed, and then disposed, thus ending its life cycle (Demirel & Danisman, 2019). This traditional economic model is not sustainable in the long run since it assumes that natural resources are limitless, depleting them and polluting the environment (Fonseca et. al.,2018). Therefore, the CE economic model comes to counteract this flaw by using resources for as long as possible, extracting the maximum value from them, thus slowing down the overexploitation of resources and reducing waste and energy (Morgan & Mitchell, 2015).

CE offers a variety of opportunities for companies as well as society and the environment. Firstly, through the minimum entry of raw materials and prolonging the lifetime of goods by implementing techniques of maintenance, repair, reuse, recycle, and remanufacturing (Fonseca et. al.,2018), CE business model creates new job opportunities and new products and services (MacArthur, 2013). By closing the loop, every participant within the supply chain will have more collaboration than in the previous linear model, thus having a better alignment between businesses and consumers (MacArthur, 2013). Additionally, a more efficient supply chain and product life management, lower waste generation, and minimization of environmental penalties make it possible to cut costs and enhance profitability (Kumar et. al., 2019). Lastly, it also shifts towards renewable energy, reducing reliance on fossil fuels and carbon emissions, and fosters long-term economic growth that benefits all stakeholders (Ghisellini et. al., 2016).

Despite the possible benefits of the CE business model, since it is still relatively recent, there are still barriers to a successful implementation of this new economic method. Companies could have trouble implementing this new model because of its high cost and its complex way to manage and report (Fonseca et. al., 2018). In addition, institutional barriers are also a reality.

The current legal and financial structure is firmly based on a linear economic model, which causes a lacking/inadequate government and legislative support for companies to adopt a CE model (Rizos et. al., 2016). Fonseca et. al. (2018) while conducting a survey with 99 Portuguese Organisations in order to evaluate their awareness concerning CE, concluded that, although they regard CE as a strategic and relevant issue for profitability and value creation, respondents claimed that in order to embrace the CE model, organisations need a more favourable institutional environment (fiscal, legal, etc). Lastly, the model requires a culture shift of the behaviour of companies and consumers, which, either because, of a lack of awareness, risk aversion, or limited sensitivity to sustainable issues (Ritzén & Sandström, 2017), becomes difficult to achieve.

In order to effectively make the transaction to the closed-loop economic model, changing consumer attitudes and consumption patterns will be a crucial process (Piscicelli & Ludden, 2016). It is in this collaborative process that the concept of eco-innovations will have a major impact (Jesus & Mendonça, 2018). OECD (2010) defines eco-innovations as creations of new or improved products, services, processes, marketing methods, organisational structures, and institutional arrangements, which lead to environmental improvements. Eco-innovation is regarded as the catapult that can transform the traditional linear model of production/consumption into a circular model (OECD, 2010) by offering solutions that, not only are profitable, but also focus on an overall reduction in the consumption of materials and energy at the same time (EIO, 2012).

2.4 Overview of Sustainable Development in Portugal

To address the most pressing environmental, social, and economic challenges that Portugal is suffering from, the country has implemented a plethora of measures that are in line with the vision and strategy defined in the European Ecological Pact, the Paris Agreement, and also taking into account the 17 SDGs.

In December 2017, an Action Plan for the Circular Economy (APCE) was approved in order to reduce the significant economic and environmental damages that resulted from the inefficient use of resources. In Portugal, three levels of operation were considered when assessing the measures to apply: macro level, focused on producing transversal and systemic effects on society to incorporate principles of circular economy (e.g. Assess tax incentives associated with reducing consumption of plastic bags); sectoral level, focused on the entire

value chain of a sector to raise its productivity and efficient use of resources (e.g. Mapping of resource flows such as usage of plastics in value chains) and micro level, focused on boosting circular economy on the regional/local scale, depending on the socio-economic profile (e.g. Facilitate industrial symbiosis networks in the regions) (Council of Ministers, 2017).

Portugal also adhered to the Net-zero coalition with the Roadmap for Carbon Neutrality 2050 (RNC2050), which established the trajectory for reducing greenhouse gas emissions in order to reach “Net zero” emissions by 2050. It defined the main guidelines for decarbonization while, simultaneously, stimulating the potential reduction in the various sectors of the national economy while ensuring a fair and cohesive transaction, supported by society. In conjunction with the RNC2050, the country also proposed a National Energy and Climate Plan, with clear objectives regarding national climate and energy policies for the 2021-2030 period. The plan consists of 58 lines of action and 206 measures, highlighting the need to decarbonize cities and promote sustainable urban development and leverage the ability to intervene at the local level (Council of Ministers, 2019).

Another element that is important to analyse is the amount of sustainability reporting that Portuguese organisations produce. BCSD Portugal (2021) revealed that, out of their 134 associated companies, 43% produced sustainability reports and there was a growing tendency to report the UN SDGs, in particular SDG 8: Decent work and economic growth, SDG 12: Responsible production and consumption and SDG 13: Climate action. The majority of associates produced non-integrated sustainability reports (separate from other financial reports) and are larger companies with higher business volumes.

Despite it becoming a growing occurrence in Portuguese organisations, sustainability reporting is still, frequently, inconsistent and fragmented. This is likely due to the lack of global reporting standards for medium and small enterprises (BCSD & Coelho, 2021). This view is further cemented with the empirical evidence that were found from Ramos et al. (2013) and Fonseca & Carvalho (2019), that identified that Portugal presented moderate sustainability reporting, more predominantly in larger organisations yet underdeveloped in small to medium-sized enterprises (SME), which make up the majority of the Portuguese business activity.

3. Methodology

In order to meet the defined objectives, a qualitative analysis will be carried out. The qualitative method chosen was interviews, which, unlike quantitative methods, is thought to provide a personal perspective while adding context and deepening our understanding of social behaviour (Silverman, 2005). These interviews were uploaded to the programme *KH Coder*, which provided text mining techniques, i.e. the usage of data analysis software, that uses natural language processing to transform a large amount of data into structured data, suitable for analysis.

This study extracts secondary data from 101 structured interviews with Portuguese personalities. Conducted in 2021 and published in 2022 by ISCTE Executive Education, these interviews bring together important texts, by multiple personalities from numerous sectors of the Portuguese public life. The interviewees include CEOs, employees from multinational organisations, entrepreneurs, managers, jurists, and university professors, among others, and they all possess extensive knowledge in the area of sustainability, making these interviews filled with important remarks on the subject.

With these 101 interviews, we can retract critical knowledge, that will provide individual and personalized answers to our research questions. We will be able to identify a general trend between all organisations regarding the measures they are applying, analyse if they coincide with the acquired theoretical knowledge in the literature review, and provide criticism about the opportunities and threats for the future of these organisations.

Since the analysis consists of a large amount of data, in an effort to be as thorough as possible and reduce the “noise” surrounding the interviews, each question asked to the respondents will be analysed separately. Therefore, there will be four separate analyses, each dedicated to its own question, which will allow for a more complete and rigorous view of the information.

In order to structure the data analysis and, subsequently, delineate conclusions, articles from the literature will be transformed into research questions that are connected to particular research objectives. Therefore, table 1 displays the research questions and objectives that were utilized.

Table 1. Research instruments and objectives

(Author, Year)	Main Issues	Research Question	Research Objective
(Pęciak, 2016)	Explains the essence and relevance of Sustainability Megatrends	RQ1: Are Sustainability Megatrends relevant for Organisations?	RO1: Exhibit the most pronounced megatrends and understand their implications
(Gaudig et al., 2021)	Explores how different organisations are tackling sustainability Megatrends	RQ2: Have Organisations adopted Sustainability measures to tackle Megatrends?	RO2: Highlight the primary sustainable practices being incorporated into the organisations' strategy
(Maxell & van der Vorst, 2003) (Hernandez, 2019)	Analysis the method for effective sustainable products and/or service development	RQ3: Have Organisations made their production more sustainable?	RO3: Derive to the most common sustainable practices applied to production
(Linthorst & de Waal, 2020) (Retief et. al., 2016)	Researches the impact that Sustainability Megatrends will have on Organisations on the future	RQ4: What are the major threats and opportunities in the future for Organisations?	RO4: Extract personal opinions regarding the future of Organisations and, consequently, the planet

Source – Self elaborated

4. Results and Discussions

4.1 Are Sustainability Megatrends relevant for Portuguese Organisations?

Firstly, we determined the most frequent used words throughout the 101 interviews. With the help of the Word Frequency List and the World Cloud, theses analyses allow us to get a broad idea of what the main topics are going to be.

Figure 2. Word Frequency List of RQ1

List				
#	Word	POS / Conj.	Frequency	
1	sustainability	Noun	236	
2	climate	Noun	192	
3	change	Noun	174	
4	planet	Noun	153	
5	economic	Adj.	145	
6	social	Adj.	143	
7	global	Adj.	139	
8	environmental	Adj.	129	
9	world	Noun	125	
10	development	Noun	121	
11	challenge	Noun	112	
12	life	Noun	110	
13	society	Noun	106	
14	country	Noun	105	
15	year	Noun	104	
16	sustainable	Adj.	102	
17	impact	Noun	100	
18	company	Noun	98	
19	human	Adj.	97	
20	resource	Noun	96	
21	time	Noun	90	
22	future	Noun	84	
23	people	Noun	84	
24	new	Adj.	82	
25	energy	Noun	79	
26	make	Verb	75	
27	only	Adv.	73	
28	action	Noun	69	
29	economy	Noun	68	
30	megatrend	Noun	68	
31	live	Verb	67	

Figure 3. World Cloud of RQ1



Source – Pro world cloud

Source – Self-elaborated based on KH Coder 3

The respondents frequently used words such as “sustainability”, “climate” and “change”, highlighting the strong association between climate change and sustainability. The interviews revealed that climate change is considered as a core Megatrend with far-reaching impacts on other megatrends. This sentiment goes in line with the word of Retief et. al., (2016), IPCC (2022), and WEF (2021) when they highlighted climate change as a paramount driver that influences other Megatrends. The concerns expressed by the respondents were reflected in words like “challenge”, “impact” and “risks”, emphasizing the perceived severity of issues like climate change, resource scarcity, and social inequalities. The triple bottom line dimensions of “social”, “economic” and “environmental” aspects were frequently mentioned together, emphasizing their interconnectedness and the potential repercussions of changes in one dimension on the others (Elkington, 2018). The word cloud also featured “United Nations” and “SDGs”, referring to the 17 SDGs that address major challenges such as poverty, hunger, and biodiversity loss. Out of all the indexes mentioned, the SDGs was the one the interviewees were

most familiar with which aligns with BCSD Portugal (2021) findings, which state that Portuguese businesses are growing a tendency to report UN SDGs.

The second method used to further deepen the analysis and start connecting concept was a word association. This analysis connects a specific word with the most frequent words associated to it.

Figure 4. Word Association of "Megatrends"

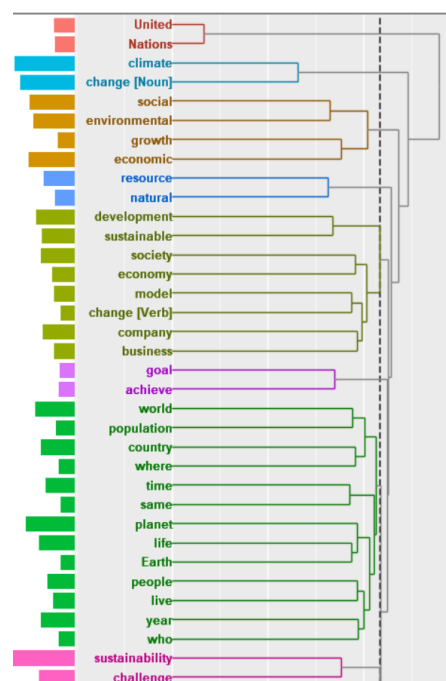
Search Entry:					
#direct					
#megatrends					
#none					
Result:					
N	word	POS	unconditional	conditional	Frequency
1	change	Noun	172 (0.031)	5 (0.069)	5.0000
2	sustainability	Noun	236 (0.043)	5 (0.069)	5.0000
3	analysis	Noun	9 (0.002)	2 (0.028)	2.0000
4	challenge	Noun	112 (0.020)	2 (0.028)	2.0000
5	development	Noun	119 (0.022)	2 (0.028)	2.0000
6	environmental	Adj	128 (0.023)	2 (0.028)	2.0000
7	nothing	Noun	10 (0.002)	2 (0.028)	2.0000
8	social	Adj	143 (0.026)	2 (0.028)	2.0000
9	sustainability-related	Adj	2 (0.000)	2 (0.028)	2.0000
10	acceleration	Noun	5 (0.001)	1 (0.014)	1.0000
11	activity	Noun	39 (0.007)	1 (0.014)	1.0000
12	approach	Noun	10 (0.002)	1 (0.014)	1.0000
13	aware	Adj	14 (0.003)	1 (0.014)	1.0000
14	awareness	Noun	18 (0.003)	1 (0.014)	1.0000
15	business	Noun	63 (0.011)	1 (0.014)	1.0000
16	cause	Noun	14 (0.003)	1 (0.014)	1.0000
17	cautious	Adj	1 (0.000)	1 (0.014)	1.0000
18	concern	Noun	44 (0.008)	1 (0.014)	1.0000
19	constraint	Noun	2 (0.000)	1 (0.014)	1.0000
20	consumer	Noun	23 (0.004)	1 (0.014)	1.0000

Source – Self-elaborated based on KH Coder 3

When identifying the most interconnected word with “Megatrends”, “change” and “sustainability” were the most associated words. This can be explained by the fact that almost all respondents manifested the constant changes that sustainability megatrends are having on the world (Ramos & Isfan, 2020). Words such as “aware”, “awareness”, “cautious” and “concern” were also associated with megatrends, confirming the current distress that the interviews feel relating this subject and the interest of organisations in combating these megatrends. Throughout the interviews it was possible to notice that the fear of Megatrends felt by the respondents stemmed from two main drivers: fear of reputational damage (Burritt & Schaltegger, 2010) and the social responsibility to minimize the negative impact of the organisations’ actions (Guest, 2010). Lastly, it is also relevant to highlight the word “acceleration” since it serves as a confirmation of the words of Pęciak (2016) when she expressed that due to the complex, uncertain, and systemic nature of megatrends, they are prone

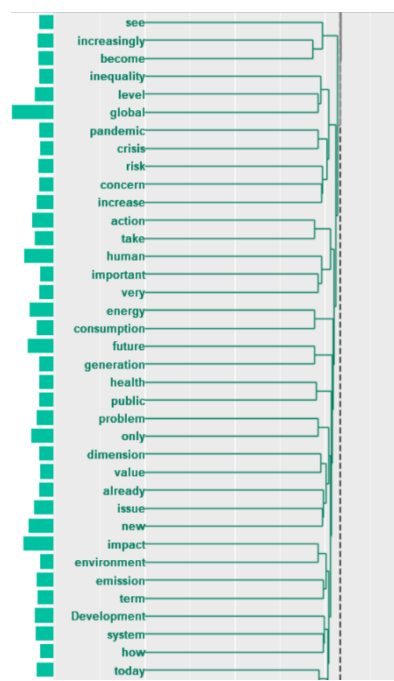
to accelerate, feed, and amplify from the effects of other megatrends, provoking consequences in both economic, social, and environmental dimensions.

Figure 6. Hierarchical Cluster pt1.



Source – Self-elaborated based on KH Coder

Figure 5. Hierarchical Cluster pt2.



Source – Self-elaborated based on KH Coder

To further continue our investigation and retrieve relevant information, a hierarchical cluster analysis was performed, which enables us to find which combinations of groups of words have similar appearance patterns.

As previously mentioned, climate change was the environmental issue that the interviewees most brought up, represented by two of the words represented in figure 5 in the blue section. It was clearly perceived as the greatest threat to humanity, being coherent with the WEF (2021), and IPCC (2022). The high level of global inequality and scarcity of natural resources were also Megatrends mentioned in the interviews (KPMG, 2012). The words “global”, “level” and “inequality” in the teal section are linked and thus often mentioned together and the same could be said about the words “natural” and “resource” in the blue section.

The words “United” and “Nations” in the red section are connected and mentioned very often. The interviewees emphasized the importance of the SDGs, however, they also pointed out the risk of not achieving the goals by 2030. Halkos & Gkampoura (2021) had the same

apprehension, concluding that although there has been some progress in specific areas, such as the ones in the economic pillar, the world is not on track and still has a long way to go to achieve the goals established. Furthermore, the recent pandemic was also mentioned a few times during the interviews, exhibited by the connection of the words “pandemic” and “crisis” in the teal section. The respondents felt that the Covid-19 pandemic accentuated the difficult situation that the world was already in and made it even more difficult to achieve the sustainable path established.

Lastly, the yellow section contains the words “social”, “environmental”, “economic” and “growth”, constituting the 3 dimensions of the Triple Bottom Line. Going further in the analysis, the words “social” and “environmental” are connected, and the same can be said about the words “economic” and “growth”. These specific connections are justified since in several interviews, respondents expressed that, currently, society has a narrow vision, that mostly focuses on economic growth, ignoring environmental and social growth. This idea confirms the words of, eg. Winter & Knemeyer (2013), Baumgartner (2014), and Silvestre & Fonseca (2020) when they mentioned that when organisations try to implement a TBL approach, social and environmental growth are often overtaken by economic growth.

4.2 Have Organisations adopted Sustainability measures?

Figure 7. Word Frequency List of RQ2

#	Word	POS / Conj	Frequency
1	sustainability	Noun	171
2	company	Noun	157
3	sustainable	Adj	140
4	social	Adj	112
5	climate	Noun	101
6	challenge	Noun	100
7	sector	Noun	100
8	change	Noun	87
9	energy	Noun	87
10	new	Adj	85
11	environmental	Adj	84
12	impact	Noun	80
13	more	Adv	77
14	more	Adv	75
15	business	Noun	73
16	development	Noun	72
17	global	Adj	71
18	make	Verb	71
19	emission	Noun	68
20	economic	Adj	67
21	carbon	Noun	65
22	level	Noun	64
23	PORTUGAL	ProperNoun	64
24	country	Noun	60
25	society	Noun	60
26	year	Noun	58
27	world	Noun	56
28	value	Noun	55
29	policy	Noun	54
30	promote	Verb	54
31	area	Noun	53

Source – Self-elaborated based on KH Coder 3

Figure 8. Word Cloud of RQ2



Source – Pro world cloud

In the second question of the interviews, it was asked how the organisation/context of the respondents has been adapting to these megatrends.

Starting with the word frequency and word cloud analysis, just like in the previous question, the words “social”, “environmental” and “economic” frequently appear in these answers as well, however, the frequency to which they were used differed. In the first set of answers, interviewees pronounced the three dimensions with a relatively close frequency, whereas in this set of answers, there is a bigger disparity between the three dimensions, with the word “economic” being used less frequently. In general, the answers revealed that these organisations have been slowly incorporating ESG principles, demonstrating closer attention to develop social, environmental and governance initiatives in their business models, such as, diversity and inclusion in the workplace, gender equality, mental health in the workplace, energy transition, etc. This observation contradicts the assertion made by Winter & Knemeyer (2013), who argue that the social and environmental dimensions are frequently overlooked.

The word “promote”, “make” and “more” are relevant, since the interviews revealed that the respondents’ organisations are either, promoting sustainable practices or intend to implement practices in the near future. Additionally, many organisations focused on innovation, explaining the presence of the word “new”. This goes in line with Gaudig et al. (2021) that stated that with the growing global social and environmental challenges, sustainability-oriented innovations are urgently needed.

In the word cloud, we can observe the words “schools” and “education”. The interviewees believe that the science and education sector, not only makes significant contributions to identify and address the consequences of megatrends, but also it is tasked with shaping the younger generation with the necessary knowledge to face these problems in the future. This is a pertinent point of view that goes in line with Nasibulina (2015) thoughts on education being necessary to form a social and environmental intellectual basis for the implementation of sustainable development principles in the future.

Table 2. Bigram

No.	N-gram	Frequency	Probability	Strength
1	sustainable development	43	0.28	1.07
2	has been	41	0.22	0.83
3	climate change	39	0.43	1.59
4	we have	39	0.15	0.54
5	social and	38	0.3	1.09
6	we are	29	0.11	0.37
7	have been	28	0.16	0.52
8	more than	27	0.18	0.6
9	and social	27	0.02	0.05
10	there are	25	0.32	1.03
11	these megatrends	25	0.18	0.58
12	carbon neutrality	24	0.35	1.12
13	challenges these	24	0.31	0.99
14	but also	24	0.25	0.8
15	for example	24	0.07	0.23
16	more sustainable	21	0.14	0.43
17	and environmental	19	0.01	0.03
18	and economic	18	0.01	0.03
19	associated with	17	0.81	2.29
20	circular economy	17	0.74	2.09

Source – Self-elaborated based on N-Gram generator

The next text mining techniques used was the bigram and trigram since it can sometimes convey a more detailed meaning than analysing a single word.

Starting with Figure 7, which depicts the Bigram table. The most common word sequence was “sustainable development”, which was anticipated since the interviewees have addressed on how their own organisation/sector was promoting sustainable development behaviour. The bigrams “carbon neutrality” and “circular economy” are the two most recurrent practices that the respondents said their organisation were trying to apply. Starting with carbon neutrality, many interviewees explained how their organisations followed the European Commission proposal and made the commitment to a decarbonization plan to reduce 45% of greenhouse gas emissions by 2030, eventually reaching carbon neutrality by 2050. In terms of committing to a circular economy, some showed interest to implement a circular business by: efficient management of natural resources, minimizing the waste created, extending the product’s life, use of renewable and recycled materials, and promoting synergies and collaborations throughout their value chain. Both these efforts evidence the implementation of the Action Plan for Circular Economy and the Roadmap for Net Neutrality 2050 imposed by the Council of Ministers (2019).

Table 3. Trigram

No.	N-gram	Frequency	Probability	Strength
1	challenges posed by	30	0.39	1.33
2	the challenges posed	30	0.01	0.04
3	posed by these	24	0.73	2.31
4	by these megatrends	24	0.1	0.31
5	the creation of	18	0.01	0.02
6	the development of	18	0.01	0.02
7	in order to	17	0.02	0.05
8	in addition to	17	0.02	0.05
9	on the other	16	0.06	0.16
10	the united nations	16	0.01	0.02
11	the other hand	15	0.01	0.02
12	in terms of	14	0.01	0.04
13	the transition to	14	0.01	0.01
14	according to the	13	0.62	1.59
15	social and environmental	13	0.1	0.26
16	the european union	13	0	0.01
17	social and economic	12	0.09	0.23
18	the need to	12	0	0.01
19	the use of	12	0	0.01
20	greenhouse gas emissions	11	0.85	2.03

Source – Self-elaborated based on N-Gram generator

Moving to Figure 8, the Trigram table, one can create a line of thought with the trigrams “the creation of”, “the development of”, “the transition to”, “the use of” and the “the need to”. Respondents used these trigrams to express the type of sustainable behaviour they have been applying in their own organisations. Obviously, due to the diverse number of sectors represented in the interviews, each respondent had very heterogeneous answers that matched their own organisation’s/sector’s reality. Nevertheless, there were some common answers between most answers, which consisted of: promoting a digital transformation, the development of circular economy models, efficient use of energy and waste reduction, raising awareness of the need for sustainable behaviour, and combating social inequalities. The transition to a carbon-neutral organisation was also heavily mentioned in the answers and the frequent use of the trigram “greenhouse gas emissions” confirms it. The trigram “the united nations” appears moderately. Some of the respondents mentioned that their organisations employed the UN SDGs as a benchmark (BCSD, 2021). Nonetheless, it’s relevant to highlight that the majority of interviewees didn’t mention if their organisation performed any type of sustainability reporting, which leads us to agree with BCSD & Coelho (2021), Ramos et al., (2013) and Fonseca & Carvalho (2019) when they argued that Portuguese businesses presented moderate sustainability reporting. This can be attributed to the absence of standardized global reporting

the increase of recycling materials, the encouragement of reusing, repairing, remanufacturing and recycling of waste/products and increasing the life cycle of products (Fonseca et. al., 2018). That is why words such as “product”, “waste”, “recycling” and “reduce” appear as highly mentioned words. These are clearly attempts to try to build upon a more circular economy, which can reduce the resource usage and emissions while improving the business competitive position and minimizing risks (Fonseca et. al., 2018).

The word “innovation” and “new” were also frequently used by the interviewees, since many acknowledged that their organisations have been making several investments to develop innovative solutions to their products, services, or overall way of operating. This urge for innovation goes in accordance with Zhang et. al. (2019), Jesus & Mendonça (2018), and OECD (2010) when they argued that technological innovations not only play a central role in transforming the traditional linear model of production/consumption into a circular model, but also improve the organisations’ performance, and therefore their financial performance as well (MacArthur, 2013) (Kumar et. al., 2019).

Lastly, the word “packaging”, which appears in the word cloud, is also worth mentioning. Since the waste generated by packaging currently constitutes 40% of annual waste generation and is on track to continue to increase (OECD, 2022), the respondents have been investing heavily in eco-packaging. In order to minimize the negative environmental impact of packaging, some of the organisations have been using biodegradable, compostable, and recyclable materials, as well as reducing the overall amount of packaging used.

Figure 12. Word Association of "Product"

Result:				
N	word	POS	unconditional	conditional Jaccard
1	life	Noun	41 (0.010)	9 (0.085) 0.0652
2	service	Noun	61 (0.014)	7 (0.066) 0.0437
3	recycle	Verb	33 (0.008)	5 (0.047) 0.0373
4	new	Adj	89 (0.021)	7 (0.066) 0.0372
5	sustainable	Adj	123 (0.029)	8 (0.075) 0.0362
6	sell	Verb	9 (0.002)	4 (0.038) 0.0360
7	thus	Adv	26 (0.006)	4 (0.038) 0.0313
8	packaging	Noun	37 (0.009)	4 (0.038) 0.0288
9	reduce	Verb	79 (0.018)	5 (0.047) 0.0278
10	rather	Adv	6 (0.001)	3 (0.028) 0.0275
11	useful	Adj	8 (0.002)	3 (0.028) 0.0270
12	extend	Verb	11 (0.003)	3 (0.028) 0.0263
13	range	Noun	12 (0.003)	3 (0.028) 0.0261
14	make	Verb	92 (0.021)	5 (0.047) 0.0259
15	design	Noun	15 (0.003)	3 (0.028) 0.0254
16	cycle	Noun	17 (0.004)	3 (0.028) 0.0250
17	raw	Adj	20 (0.005)	3 (0.028) 0.0244
18	environmental	Adj	67 (0.016)	4 (0.038) 0.0237
19	food	Noun	34 (0.008)	3 (0.028) 0.0219
20	need	Noun	35 (0.008)	3 (0.028) 0.0217
21	production	Noun	50 (0.012)	3 (0.028) 0.0196
22	circular	Adj	54 (0.013)	3 (0.028) 0.0191
23	eco-design	Noun	3 (0.001)	2 (0.019) 0.0187
24	resell	Verb	3 (0.001)	2 (0.019) 0.0187
25	electronic	Adj	4 (0.001)	2 (0.019) 0.0185

Source – Self-elaborated based on KH Coder 3

Figure 11. Word Association of "New"

Result:				
N	word	POS	unconditional	conditional Jaccard
1	technology	Noun	60 (0.014)	7 (0.071) 0.0464
2	challenge	Noun	72 (0.017)	6 (0.061) 0.0366
3	creation	Noun	16 (0.004)	4 (0.041) 0.0364
4	business	Noun	76 (0.018)	6 (0.061) 0.0357
5	product	Noun	106 (0.025)	7 (0.071) 0.0355
6	model	Noun	65 (0.015)	5 (0.051) 0.0316
7	introduce	Verb	7 (0.002)	3 (0.031) 0.0294
8	adapt	Verb	8 (0.002)	3 (0.031) 0.0291
9	example	Noun	79 (0.018)	5 (0.051) 0.0291
10	buy	Verb	9 (0.002)	3 (0.031) 0.0288
11	skill	Noun	10 (0.002)	3 (0.031) 0.0286
12	promote	Verb	88 (0.020)	5 (0.051) 0.0276
13	generation	Noun	15 (0.003)	3 (0.031) 0.0273
14	customer	Noun	19 (0.004)	3 (0.031) 0.0263
15	problem	Noun	26 (0.006)	3 (0.031) 0.0248
16	implementation	Noun	28 (0.007)	3 (0.031) 0.0244
17	opportunity	Noun	30 (0.007)	3 (0.031) 0.0240
18	addition	Noun	31 (0.007)	3 (0.031) 0.0238
19	create	Verb	77 (0.018)	4 (0.041) 0.0234
20	sustainable	Adj	123 (0.029)	5 (0.051) 0.0231
21	world	Noun	43 (0.010)	3 (0.031) 0.0217
22	production	Noun	50 (0.012)	3 (0.031) 0.0207
23	organic	Adj	4 (0.001)	2 (0.020) 0.0200
24	paradigm	Noun	4 (0.001)	2 (0.020) 0.0200
25	academic	Adj	5 (0.001)	2 (0.020) 0.0198

Source – Self-elaborated based on KH Coder 3

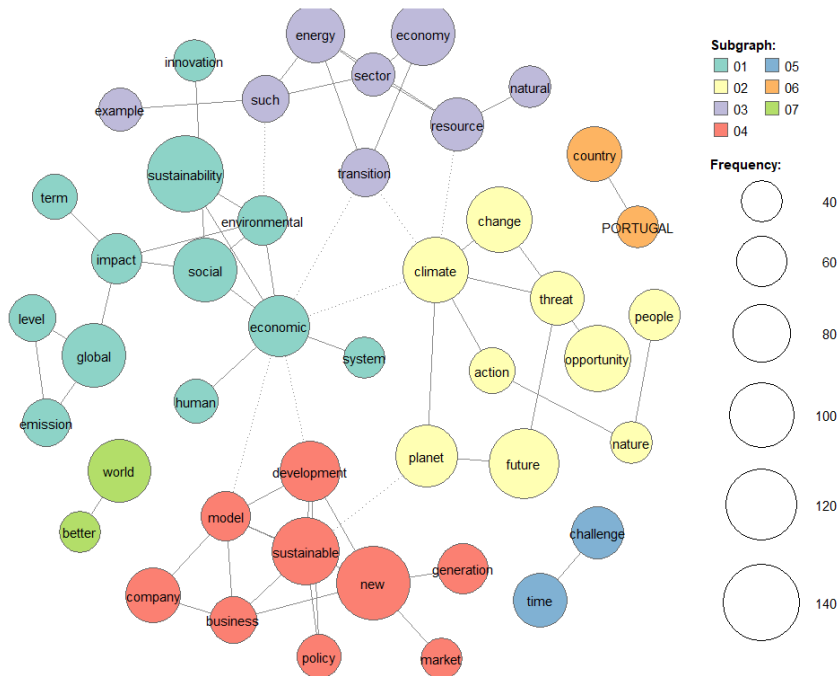
A word association analysis was conducted for the word “product” and “new”. Concerning the word “product”, since it’s the object of analysis for this question, thus relevant to investigate. Respondents and their organisations are focused on extending the life of their products to reduce waste and conserve resources, emphasizing recycling and reduction to minimize environmental damage. Efforts towards circularity are evident, as indicated by the associated words “life”, “recycle”, “reduce” and “circular”. Investments in “packaging” to reduce waste align with this objective.

Regarding the word “new”, since the theme of innovation is one of the most talked topics in the interviews, it was chosen to explore. Respondents emphasized the importance of making changes to their “products”/services to enhance sustainability. They recognized the role of “technology” in achieving resource efficiency and mentioned the digital transition as a significant measure. This shift towards digitalization enabled dematerialization, improved material and energy efficiency, and promote digital inclusion, transparency, and accountability. The focus on words like “create”, “customer” and “business” indicates the potential for new markets and revenue streams through sustainable transformations going in with MacArthur (2013) when he mentioned that circular economy business models can create new job opportunities and new products and services. By aligning their offerings with sustainability and cost-effectiveness, organisations can target customers seeking these qualities. These measures

reflect a change in the business “model”, highlighting the need for organisations to adopt models that positively impact the world and create value for stakeholders.

4.4 What are the major threats and opportunities for the future?

Figure 13. Co-occurrence network



Source – Self-elaborated based on KH Coder

Figure 13 represents a Co-occurrence network or mind map. Through this diagram it was possible to analyse the link between concepts and line of thoughts that the interviewees had regarding this question. The graph is divided into seven subgraphs which will be analysed individually.

Starting the analysis with subgraph 02, the interviewees emphasized that climate change poses a significant threat to the planet and should be a priority for mitigation (Retief et al., 2016), (IPCC, 2022) (WEF, 2021). But in this threat, lies a great opportunity for organisations. The connection and proximity of the words “threat” and “opportunity” are clear indications of this perspective. Practically all respondents had an optimistic view of Portugal having a unique opportunity to rebuild the country in a sustainable and responsible manner. Therefore, an opportunity arises for organisations to implement a set of measures that, not only make a positive effect on the future but also provide a competitive advantage for them. This train of thought aligns with Linnenluecke & Griffiths (2010), White (2009), and Gimenez et al. (2012)

when they asserted that a company's involvement in social and environmental responsibility can improve its performance and result in financial gains.

Moving to subgraph 04, respondents expressed the opportunity to reimagine most organisations current business models, which are mostly focused on economic growth. Instead, they exhorted the creation of new sustainable business models which prioritize on resource and energy efficient usage, innovation, decarbonisation, circular economy, digitalisation (Fonseca et. al., 2018), etc. The connection of the words “new”, “sustainable”, “development”, “model”, “business” and “company” confirms this point of view. This shift towards sustainability can attract a new market comprising customers who value conscious choices, particularly the younger generation, known for their growing interest in sustainable attitudes (Yamane & Kaneko, 2021), hence the presence of the word “market” and “generation”. Interviewees placed their hopes for the future in the younger generation to be able to mitigate the harm already caused. Additionally, the word “policy” is of extreme importance, with respondents stressing the need for ambitious sustainable policies, including taxes, subsidies, and incentives to encourage conscious decisions. Regulations on emissions, energy, and resource efficiency, waste management standards, and transparent reporting are seen as crucial for consistent and stable regulation. This point of view is the same as Rizos et. al., (2016) and Fonseca et. al., (2018) when they argued that, since the existing legal framework is firmly rooted in a linear economic model, it results in insufficient government backing for companies to embrace a circular economy model.

Subgraph 06 reflects the respondents' focus on the future of Portugal, indicating their concern for exploring the specific threats and opportunities facing the country. In contrast, subgraph 07 reveals a global perspective among the interviews, recognizing Megatrends as a worldwide phenomenon that demands a coordinated global effort for effective mitigation.

Moving on to subgraph 01, which is the most complex subgraph, it's composed by 12 words and, just like subgraph 04, one can observe both a threat and an opportunity in it. With the appearance of words such as “global”, “level”, “emission” connected to the word “impact”, it is clear that interviewees expressed concern regarding the high levels of greenhouse gas emissions. Furthermore, the word “impact” is connected to the words “social”, “environmental” and “economic”, which represent all the dimensions impacted by climate change. As expected, the word “sustainability” was mentioned numerous times and it is evident the connection with all three dimensions. In order to mitigate the high global levels of greenhouse emissions and

reduce the impact on the economic, social, and environmental scale, the respondents stated that sustainability-related innovations will be essential, justifying the appearance of the word “innovation” connected to the word “sustainability” (Zhang et al.,2019) (Jesus & Mendonça, 2018) (OECD, 2010).

In subgraph 03, respondents mentioned the necessity to strengthen the energy transition in the market. In their view, the decarbonisation of the economy is imperative to combat climate change and preserve our natural resources. Therefore, interviewees appealed to every business to integrate sustainability principles into their existing processes and organisational culture in order to achieve a culture shift towards the energy transition (Fietz & Gunther, 2021).

And lastly, subgraph 05, expresses a threat that most respondents feared when talking about the future of our planet, which is the small-time window that humanity has in order to reverse the effects of climate change.

5. Findings and Contributions

Regarding the first research question “Are Sustainability Megatrends relevant for Organisations?”, throughout this investigation it was made clear that all interviewees demonstrated the significance of Sustainability Megatrends. Ramos & Isfan, 2020 expressed the need of sustainability-oriented changes in organisations due to the prevailing threat of Megatrends and all of the respondents confirmed this point of view by the use of the word “aware” and “cautious” in figure 4. The high frequency of the words “climate” and “change” in figure 2 and 3 evidenced that climate change is the most pronounced Megatrend, in consonance with Retief et. al. (2016), IPCC (2022), and WEF (2021). The connection of the words “natural and “resource” in figure 5 and “global”, “level” and “inequality” in figure 6, also highlighted the scarcity of natural resources and the high level of inequality, in consonance with KPMG (2012). Furthermore, the interconnectivity of Megatrends was revealed as a crucial factor going in line with Linthorst & Waal (2020). The analysis also indicated that organisations are, mainly, compelled to tackle Megatrends due to reasons such as reputational damage, loss of competitiveness and/or the social responsibility to minimize their negative impact which agrees with Burritt & Schaltegger (2010) and Guest (2010) yet there was little mention of operational impact felt by the organisations, which contradicts Deloitte (2021).

Regarding the second research question “*Have Organisations adopted Sustainability measures to tackle Megatrends?*”, the findings demonstrated that organisations are proactively incorporating sustainable measures into their business models. The majority of respondents are embracing ESG principles by actively promoting sustainable practices and giving special focus to the social and environmental dimensions, which is evidenced in figure 7 with words like “social”, “environmental” and “promote” and table 3 with trigrams such as “the transition to” and “the development of”. This goes against the words of Winter & Knemeyer (2013) when they mentioned that the social and environmental dimensions are often forgotten. Moreover, some of the responses also underscore the importance of education, since in their view and Nasibulina (2015), education is a focal point in achieving the importance of a more environmentally conscious and inclusive citizens, demonstrated in figure 6 with the word “education”. This constitutes the first indication that the respondents agree with expanding the TBL into a Quadruple or Quintuple Bottom Line, having a bigger emphasis on the cultural organisational development. The presence of the bigrams “carbon neutrality” and “circular economy” in Table 2 showed that transitioning to carbon neutrality and developing circular

economy models as the two most recurrent practices being incorporated to the organisations' strategy, which aligns with Portugal's Action Plan for the Circular Economy and Roadmap for Carbon Neutrality. However, the majority of organisations isn't implementing a sustainability report which is likely due to the absence of standardized global reporting guidelines for medium and small businesses, like BCSD & Coelho (2021), Ramos et. al. (2013) and Fonseca & Carvalho (2019) stated.

Referring the third research question "*Have Organisations made their production more sustainable?*", the findings indicate that the interviewed organizations have taken specific actions to address the challenges posed by megatrends in their products and services. Words like "energy", "product", "waste", "recycling", "circular" etc. in figure 9, 10 and 12, showed that it is clear that circular economy measures are starting to be used in organisations' productions. Additionally, the word "innovation" in figure 9 and words like "technology", "create", "product" in figure 11 allowed to conclude that by fostering a culture of innovation and the adoption of favourable sustainable policies, organisations can lead the charge in transforming the traditional linear model of production/consumption into a circular model, confirming the words of Zhang et al. (2019), Jesus & Mendonça (2018), OECD (2010), Rizos et al. (2016) and Fonseca et al. (2018).

Lastly, the fourth research question "*What are the major threats and opportunities in the future for Organisations?*", based on the analysis of figure 13 subgraph 02, and confirming the idea of Retief et. al. (2016), IPCC (2022) and WEF (2020), climate change remains has the most menacing threat in the respondent's view, however, it was also perceived has an opportunity for organisations to rebuild their business model. Subgraph 03 and 04 on figure 12, further confirms the appeal of interviews for organisations to renovate their business model, focusing on eco-innovations, decarbonisation and circular economy, which not only mitigate environmental and social harm but also offer competitive advantage, confirming Linnenluecke & Griffiths (2010), White (2009) and Gimenez et al. (2012). Lastly, the interviewees stated, in accordance with Fietz & Gunther (2021), that when transitioning to a new sustainable business model, a true culture shift must take place, which again, exhibits an effort on behave of organisations to expand the TBL and focus on cultural organisational development. Organisations must embrace sustainability not as an isolated initiative but as an integral part of their existing processes and organisational culture. They must be transparent, embedding sustainability principles into every aspect of their operations, while providing sustainability reporting to hold themselves accountable for their actions.

6. Conclusions

The need to address Sustainability Megatrends and integrate sustainability into organisational strategy has become increasingly critical and recurrent in today's world (Gaudig et. al., 2021). Portugal is particularly vulnerable to extreme weather events and is one of the countries most affected by climate change. As such, the study conducted looks to understand the extent to which sustainable behaviour is being integrated into Portuguese organisations. A qualitative analysis of secondary data, composed of 101 interviews, was conducted, with the key aim of assessing the level of integration of Sustainability in Portuguese organisations, with an emphasis on Sustainability Megatrends.

As an answer to the key research questions, it should be noted that Megatrends hold great relevance for Organisations. It was clear that the majority of Organisations are currently implementing sustainable practices in their business strategy, with the majority of organisations currently adapting their production to become more sustainable. Consequently, it's also evident that there is still progress to be made. Organisations ought to adapt sustainability not merely as an isolated initiative, but as an inseparable element of their processes and organisational ethos.

With this research, it was able to confirm previously developed concepts and also provide approaches to enhance the sustainability of Portuguese organisations. In the future, it would be interesting to have a more detailed analysis of specific sectors, for example, the textile sector, which is often considered one of the most polluting sectors globally (Pal & Gander, 2018), yet it's highly relevant in Portugal's economy. Furthermore, it would also be valuable to analyse and compare the adoption and implementation of new sustainable business models by organisations from other foreign countries.

7. Limitations

During the course of this research, some limitations were encountered. Firstly, the concept of Megatrends and sustainability, and its application in organisations is vast, which posed a challenge at first to maintain congruent objectives while avoiding other relevant aspects. Additionally, although the interviews were able to show a macro trend between all the Portuguese sectors represented, this constituted two limitations: not every sector was represented in the interviews and we could only get a broad idea of what the majority of organisations were implementing, thus not very detailed.

Furthermore, the size and nature of the interviews manifested another limitation. Since the majority of interviews were quite extensive and very personal to the organisation of the respondents', many insightful points shared during the interviews were not adequately reflected in the imagery provided by KH Coder due to low occurrence of certain words.

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