Bachelor’s Final Thesis in Industrial Engineering

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# The integration of ESG practices in companies operations. A literature review analysis.

**Author: Ana Rosa Ballester Climent**

**Tutor: Mauro Mancini & Sara Bossi**

**Cotutor: Raúl Francisco Oltra Badenes**

# Abstract

Sustainable development is without the shadow of a doubt one of the most important challenges that global economy faces nowadays. Society and companies have become more aware of the urgent need to integrate and implement sustainable practices in their daily life and in corporate operations, as illustrated by the growing number of publications and academic research produced in the existing literature regarding this matter over the past recent years.

The present literary review aims to provide, on the one hand, a conceptual framework for ESG integration by presenting an overview of the theoretical background for sustainability and sustainable development placing the focus on the European framework , introducing the main benefits and impacts of ensuring a corporate sustainable performance by defining and analysing the main sustainable business models conceptualized in the academia as well as providing a broader classification and categorization of them according to different principles.

On the other hand, the present literature review provides an insight into the state of the art for the integration and implementation of ESG practices in companies operations from a practical approach. It aims to create a synergy between theory and practice by illustrating the best practices and describing the main functional areas identified for improvement in the existing literature to enhance corporate sustainable performance with the aim of guiding firms to successfully implement sustainable practices in their core operations, supporting managers in the decision-making process regarding sustainability and enabling the shift from the traditional business models to sustainable ones. It also highlights the importance of corporate sustainable performance assessment as means to reinforce the ESG implementation in companies operations, promote continuous improvement as well as to enable the identification of the practical limitations that firms need to overcome in the forthcoming future.

The methodology selected and employed for the development of the literature review analysis and the fullfillment of its principal goals is the mixed literary review combining both conceptual and systematic search . The methodology adopted lead to the construction of a robust search protocol by the definition of the selection criteria that enabled to become more knowledgeable in the topic by the extraction of unbiased and foundated conclusions and the obtention of reproducible search results.

The present literary review serves the purpose of the identification of the principal trends in the existing literature, the generation of critical views regarding the ESG integration and implementation in companies operations and the proposition of lines for future research, while acknowledging the limitations encountered during the development of the literature review analysis.

# INDEX:

## General introduction

The aim of this introduction is to present the main drivers which encouraged me to opt for developing my Bachelor's Final Thesis on the integration of ESG practices in companies operations, illustrating my personal motivation to carry out this literature review analysis on this matter as well as providing a first insight on the principal goals pursued, the relevance of the work produced and its contribution for the academia and practitioners aiming to adopt sustainability at the heart of their interest.

I personally regard myself as an individual fully aware of the urgent need to integrate sustainability in all aspects of life as the key to generate social value and to reduce and mitigate the negative impacts of human activity on the planet, tackling global threats such as climate change or the depletion of natural resources with the aim of fostering sustainable development and ensuring the promotion of a sustainable and stable global economy without compromising the potential and capacity for future generations to meet their needs and thrive.

Since a very short age I had realized that I wanted to become an Engineer, showing my passion for science and commitment with society to apply my technical knowledge to improve people's daily life by promoting sustainable solutions and reducing the environmental footprint. I have been genuinely interested, since the start of my Bachelor's degree in Industrial Engineering, in sustainability and renewable energies as well as in project management and entrepeneurship.

Having completed the major part of my studies in the Politecnico of Valencia, the Erasmus grant enabled me to finish the last semester of my degree as an Erasmus student in Management Engineering of the Politecnico di Milano, where I was offered to work in the literature review analysis regarding the ESG practices integration in companies' operations under the supervision of Professor Mauro Mancini and Sara Bossi, PHd student, which provided me with the guidance required to perform my Bachelor's Final Thesis and supported me throughout the whole process.

I regarded the proposition of the Final Thesis topic as a unique opportunity to academically contribute to the adoption of corporate sustainable performance and to become more knowledgeable on the matter while working with high level professionals and docents. The elaboration of my Bachelor's Final Thesis on the integration of ESG practices in companies operations, not only suited perfectly my personal interests with my technical background in Industrial Engineering, but also posed a new challenge that I embraced with motivation and commitment to do my best and fullfill my potential in order to meet the high-quality standards demanded and cover my lack of experience on this kind of academic work.

The present literary review comprises the theoretical background on sustainability and sustainable development placing the focus on the European framework, the analysis of the main impacts and benefits reaped from the ESG integration on corporate performance, the definition and categorization of the different sustainable business models, the identification of the dimensions for the implementation and adoption ESG practices in companies core operations from a practical approach, and the relevance of ESG disclosure and standarized assessment of corporate sustainable performance. It concludes with the discussion of the critical views generated from the analysis of the existing literature, the obtention of general conclusions, the acknowledgement of the limitations encountered during the elaboration of my Bachelor's Final Thesis and last but not least, the proposition of future research lines for academia and practitioners.

# 1.Theoretical Background: Sustainability & ESG performance

## 1.1 Introduction

This first section of the literary review aims to be mainly introductory and informative focusing on the recent history of the past decades with the objective of explaining the origins and evolution of the terms and concepts that will be used throughout the course of the literature review analysis, such as sustainability, sustainable development, socially responsible investment (SRI), corporate social responsability (CSR) and ESG performance. A conceptual framework for corporate sustainable performance will be provided by the academical definition of the principal terms related to sustainability and the presentation of the European framework for sustainable development.

To achieve this goal it is vital to first introduce an overview of the historical development of socially responsible investment (SRI).

## 1.2 Development and evolution of the concepts

The origins of the social responsibility component in corporate behaviour trace back two millennia and were purely linked to religious beliefs and ethicals values. It was not until the mid 1970s that the modern SRI term started to be defined. (Martini, 2021)

Having faced the cruelty, tragedy and disastrous consequencies from the world wars, companies began to understand their influence and important role played in society. Similarly, investors started feeling the need to become proactive in generating positive impact and creating value with their investments. (Mauricio Andrés Latapí Agudelo, 2019)

The latter campaigns in conjuction with the merge of social movements promoting the fight and respect for civil rights and democratic participation enabled the term SRI to differenciate itself and come out from the religious conception . (Martini, 2021)

Nowadays, with immediate global threats arising such as climate change, the rising levels of emissions and pollution or the depletion of natural resources, society is more aware of the urgent need to take action in order to mitigate the effects of human activity on the planet. Investors not only seek for profitable returns but also look for the opportunity to align their personal values with their investments portfolio. Ibid.

In this context, companies have started showing larger commitment to adopt ESG practices (Environmental, Social and Governance) in their performance and reduce their negative impact in order to pursue sustainability besides ensuring profitability and finance stability. (Boffo, 2020)

The modern term of SRI is nowadays conceived according to the Global Sustainable Investment Alliance (GSIA) as an investment approach that considers the integration of environmental, social and governance (ESG) factors in the traditional finance risk analysis to ensure sustainable development as well as stable finances and profitability in the long-run.

As a response to the prominent growth of SRI in the past decades, several initiatives have been defined and implemented by international organizations with the aim of promoting and ensuring sustainable development in a feasible and efficient way.

In 2006, 6 Principles of Responsible Investment were launched by the United Nations (UN PRI). These principles were developed by an international group of institutional investors with the objective of providing guidelines for private investors to integrate ESG issues into investment practice and developing a sustainable global financial system. In 2015, the UN stablished the Sustainable development goals for 2030 Agenda which represent the objectives to be achieved by the UN members to ensure sustainable development. (Martini, 2021).


Figure 1. UN Principles of Responsible Investment


Figure 2. 17 SDGs

### *1.2.1 The European Framework for sustainable development*

After this introduction about the history and evolution of the concepts of sustainable development and SRI, the focus will be placed at the current situation and challenges that companies are facing nowadays as well as on the efforts being made by the regulatory bodies and institutions in the European framework to integrate ESG practices in corporate performance, with the aim of defining the context in which the literary review is going to be developed.

During the past recent years, the European Comission has launched vital initiatives to create and define a framework in order to transform Europe's economy into a more sustainable one by the integration of ESG factors in the financial system. (Commission, 2020)

In October of 2014, took place *The 2030 Climate and Energy Framework* that set up new targets to reduce greenhouse gas emissions and promote the use of renewable energies in conjuction with a proposition of a new governance system and performance indicators in order to make the EU's economy greener, more efficient and sustainable.

Paris Climate Conference was held in 2015, when 195 countries reached a universal agreement to mitigate the effects of global warming and climate change adopting a common plan of action to achieve the objectives defined and stablishing regulatory measures and policies to limit global warming bellow 1.5 ºC. Together with the 17 SDGs for 2030 Agenda, these first initiatives represent the roots of the European framework for sustainable development. (Amr ElAlfy N. P.-B., 2020)

In 2016, the European Comission stablished the EU high level Group on sustainable finance that resulted in the creation of eight recommendations including a classification system and unified taxonomy for the EU sustainable framework. These recommendations have been crucial in the definition of the subsequent initiatives. (Martini, 2021)

In 2017, the European Commission elaborated reports with the purpuse of stablishing the guidelines on how to integrate ESG factors in companies performance and shedding light on how to address and evaluate the risks that it may pose to financial stability. Ibid.

The Action Plan on Sustainable Development was born in 2018 to help achieve sustainable financial growth. The European Comission created the Technical Expert Group on sustainable finance which developed: a EU taxonomy on environmentally sustainable activities, benchmarks for low-carbon investment strategies, a EU Green Bond Standard and guidance to enhance corporate disclosure of environmentally issues. Ibid.

In 2019 , a series of draft rules were published by the European Comission with the aim at providing guidance and advice for investment firms and insurance distributors to take into consideration ESG factors in their investment portfolio. (Borja Diez-Cañamero T. B.-O., 2020)

In a nutshell, this introductory chapter served the purpose of introducing an overview of the recent history in order to illustrate the development and evolution of the concepts regarding sustainability. It is important to highlight that nowadays society has become more aware of the utmost need to act within the framework of sustainable development and integrate ESG practices in the companies operationsto ensure sustainability besides profitability. Particularly, the EU during the recent years has come a long way to define the framework for sustainable development with the elaboration of several plans of action, the stablishment of regulatory measures and the implementation of common policies in the right direction to ensure the integration of sustainable practices in companies operations.

## 1.3. Definition of the concepts

The following subchapter of the literary review serves the purpose of providing an academic and detailed definition of the most recurrent terms used in the literature review analysis with the aim of setting the conceptual framework in which the the present work is developed.

Sustainability is defined by the UCLA as "*the integration of environmental health, social equity and economic vitality in order to create thriving, healthy, diverse and resilient comunities for the generations to come.*"

An initial contribution to conform the three dimenions of sustainability was the concept of the Triple Bottom Line. The TBL is based on the three inter-linked purposes of economic prosperity (profit), environmental protection (planet), and social equity (people), and seeks to create a balanced performance among the three sustainability dimensions. (María Jesús Muñoz-Torres).

Sustainability is often regarded as a long-term objective whereas sustainable development refers to the actions and processes that ensure sustainability is achieved. Sustainable development can be defined as a economically efficient, environmentally sustainable and socially equitable development which aims to meet the social present needs while ensures that the ability for future generations to meet their own is not compromised by the human action of today. (Martini, 2021)

The sustainable development concept was born in 1987 with the Brundtland report as a part of the UN World Comission on Environment and Development. Sustainable development was first referred in this report and has come a long way with the definition of the 17 Sustainable Development Goals for 2030 Agenda by the UN in 2015. (Unesco)

These 17 SDGs were defined as a universal call to take action to protect the planet and ensure sustainability and prosperity for the human being regardless of the culture, gender or condition. The 17 Goals were adopted by all UN Member States as part of the 2030 Agenda for Sustainable Development, which started a 15-year plan to achieve the Sustainable Goals. Although progress is being made in many different places, more action is required to advance at the speed and scale desired (Nations). The 17 SDGs are illustrated in the following table:

| | |
|---|---|
| **1.** | No poverty |
| **2.** | Zero Hunger |
| **3.** | Good health and well-being |
| **4.** | Quality education |
| **5.** | Gender equality |
| **6.** | Clean water and sanitation |
| **7.** | Affordable and clean energy |
| **8.** | Decent work and economic growth |
| **9.** | Industry Innovation and Infrastructure |
| **10.** | Reduced inequalities |
| **11.** | Sustainable Cities and Communities |
| **12.** | Responsible Consumption and Production |
| **13.** | Climate action |
| **14.** | Life below water |
| **15.** | Life on land |
| **16.** | Peace, justice and Strong Institutions |
| **17.** | Partnership for the goal |

Table 1. List of the 17 Sustainable Development Goals

Source: United Nations

Economic, environmental, and social sustainability are the 3 main pillars in which sustainable development is based. It aims to promote a responsible and moderate exploitation of natural resources, fairness and equality among human living conditions and wellfare, as well as the optimization of the production processes to mitigate the impacts of companies activities on the environment and ecosystems. (Martini, 2021)

The consideration of the cultural dimension regarding the preservation and respect of cultural diversity is also gaining importance in the paradigm of sustainable development. Ibid.

Environmental, Social and Governance (ESG) criteria is defined by the CFI (Corporate Finance Institute) as a set of standards for a company's operations that socially conscious investors consider besides the profitability or the risk presented by the potential investment opportunities, aiming to reflect their values through their investment portfolio.

The Corporate Finance Institute divides the ESG factors in three main broad categories: Environmental, Social and Governance. (Witold Henisz, 2019)

The Environmental criteria considers the company's use of energy, efficiency and use of renewable energies, water intake, levels of emissions produced, pollution and contribution to climate change, waste management, raw materials and products recycling, exploitation and conservation of naturals resources, among others. (Boffo, 2020)

This criteria aims to measure and regulate the extent in which a company's performance affects the environment and the ecosystems of the living beings with the focus on preserving the natural resources and promoting the mitigation of the environmental footprint resulted from corporate operations. Ibid.

The social criteria considers the internal and external relationships of the company. Promoting the defense of the workers rights, fair laboral policies and conditions in the workplace, diversity and inclusion. It also addresses the relationships with the communities and institutions in which the company operates. (Witold Henisz, 2019)

The governance criteria refers to the internal system, set of practices controls and procedures of the company to govern itself, considers the decision-making process, the compliance with the law, determination of new directions and goals for the company, stablishment of new policies and fulfillment of the external stakeholders needs (Witold Henisz, 2019). This criteria advocates for total transparency of the transactions and decisions, diversity and independence of the board, the respect of the shareholders rights and stablishment of corporate ethics, as well as the promotion of active fight against corruption and bribery. Ibid.

The adoption of ESG practices is the way for companies to operate within the sustainable development framework.

Socially Responsible Investment (SRI) can be defined according to the Global Sustainable Investment Alliance (GSIA), as an investment approach that considers environmental, social and governance (ESG) factors in portfolio selection and management. There are other similar terms such as ethical investment, responsable investing and social investing which can be collectively referred to as sustainable investing or SRI.

SRI not only enables investors to align their personal values with their investment portfolio but also encourages firms to reduce their negative impact on the environment and society. (Martini, 2021)

SRI practices aim to integrate ESG factors into traditional financial risk analysis. On the evidence that ESG factors incorporation can pose a material risk for financial investors and companies it has become essential to include their integration within the traditional risk analysis in order to ensure more stable finances and succesful performance in the long-run besides contributing to sustainable development. (Ali Alshehhi, 2018)

The European Commission states that CSR is a *"concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis; being socially responsible means not only fulfilling legal expectations, but also going beyond compliance and investing more into human capital, the environment and therelations with stakeholders*. The International Organization for Standardization (ISO) defines CSR as the "*responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that: contributes to sustainable development, including health and the welfare of society; takes into account the expectations ofstakeholders; is in compliance with applicable law and consistent with international norms of behavior;and is integrated throughout the organization and practiced in its relationships*" (Borja Diez-Cañamero T. B.-O., 2020)

Corporate Social Responsibility (CSR) and Socially Responsible Investment (SRI) can be considered two sides of the same coin, both look for the generation of positive impacts in the environment and society besides obtaining profitable returns. It could be argued that CRS looks at it from the companies perspective while SRI represents the viewpoint of the investors within the companies. (Martini, 2021)

CSR iniatiaves involve different approaches ranging from integrating sustainable and ESG practices in the operations of the company to the total transformation of the business model or company strategy. (Ali Alshehhi, 2018). A sustainable business model can be defined as a business model that creates competitive advantage through superior customer value and contributes to a sustainable development of the company and society. (Joaquin Sanchez-Planelles, 2020)

Corporate Finance Performance (CFP) represents a quantitative measure of the success in the companies performance regarding the use of its business assets and the generation of revenues and profitability of it. (Ibid)

### 1.4 Conclusions

The first chapter of the literary review analysis has served the purpose of defining the theoritical background on sustainability and ESG corporate performance by providing a historical overview of the evolution of the concepts regarding sustainability as well as a detailed academic definition of them. Moreover, it has provided an insight into the European framework for sustainable development to illustrate the rising awareness not only by companies and investors but also of institutional organizations, directing their efforts to ensure the integration and implemention of ESG practices in corporate performance.

Although SRI and CSR have experimented a significant growth over the past decades and despite the European Comission's efforts to define the sustainable framework, more work needs to be done in order to overcome the principal obstacles that prevent them from continuing growing.

The lack of common definitions, disclosure, unified taxonomy and standarised metrics for the assessment of ESG integration within the companies performance present major challenges for the full development of the socially reponsible investment (SRI) and corporate social responsibility (CSR) , and will be further discussed in the course of the literary review

## 2. Methodology

### 2.1 Introduction

The methodology considered more appropiate and suitable to develop the literary review analysis on the integration of ESG practices in companies operations is the mixed literary review, combining both systematic and conceptual search.

The systematic literary review is a review that uses systematic and explicit methods to identify, select and critical appraise relevant research with the aim of extracting unbiased conclusions and obtaining reproducible search results by the elaboration and execution of a robust systematic search protocol. The systematic approach is useful to find evidence from empirical data in order to formulate and verify hypothesis whereas the conceptual approach focuses on building a theoretical understanding through the integration of diverse interpretations and the stablishment of a connection between the research matter and the context in which is framed.

Ricardo Ayala reflected on the suitability for selecting the conceptual or systematic approach to perfom a literary review in his work published in 2018 "*Thinking of conceptual and systematic reviews*". Furthermore, in his worked he highlighted the advantages and benefits from the consideration of both approaches and provided examples to illustrate when a mixed literary review resulted the most convenient methodology choice. (Ayala R. , 2018)

We opted for a mixed literary review pursuing the development of a conceptual framework enabling a deeper understanding of the current challenges faced by companies nowadays regarding the integration of ESG practices in their operations while generating new critical views supported by empirical evidence analysed systematically.

### 2.2 Search Methodology

Before stablishing the criteria of the systematic search protocol, five preliminary theoretical questions were raised as food for thought with the aim of becoming more knowledgeable in the topic of the literary review.

We conducted in first place a conceptual search using the scientific database of Scopus, with the purpose of gaining a deeper understanding by looking for the answers of the preliminary theoretical questions, analysing the evolution and defining the concepts, in order to acquire a solid base to perform the literary review.

These questions raised were the following:

*1.- How has the analysis of companies impacts evolved over time and how did the concept of ESG performance develop?*

*2.- What is the theoretical background of ESG research*

*3.- How do companies evaluate ESG priorities?*

*4.- How ESG practices are integrated in companies operations nowadays?*

*5.- How do companies evaluate ESG performance?*

Seeking for information to answer these preliminary questions not only enabled to gain insights about the current challenges that nowadays enterprises are facing to integrate ESG practices within their operations and performance, but also helped to define the theoretical background and conceptual foundations as well as synthezise the main ideas supported in the existing literature.

After the initial conceptual search we defined the systematic search protocol in order to collect information from the previous existing literature thematically related with the aim of becoming more knowledgeable in the topic to develop our own critical views.

The steps followed in the definition of the systematic search protocol are listed below:

*1.Set a clear objective*

*2.Select the search platform*

*3.Define the keywords and the booleanoperators*

*4.Define the eligibility criteria*

*5.Define the search query*

*6.Perform the search*

*7.Abstract screening*

*8.Full-text screening*

The first step is to reflect on the relevance and the purpose of the literary review, defining the aim and scope of the work and setting clear objectives to pursue with the development of the literary review analysis.

Afterwards, keywords were carefully selected and boolean indicators were defined to conduct the systematic search in Scopus database introducing the following string, taking into consideration several eligibility criteria regarding the subject area, document type and language, which resulted in a initial sample of 610 documents:

TITLE-ABS-KEY ( esg OR csr OR sustainable W/10 practic* AND compan* OR busines* AND integrat* OR implement* ) AND ( LIMIT-TO ( OA , "all" ) ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) OR LIMIT-TO ( DOCTYPE , "re" ) ) AND ( LIMIT-TO ( SUBJAREA , "BUSI" ) OR LIMIT-TO ( SUBJAREA , "SOCI" ) OR LIMIT-TO ( SUBJAREA , "ENVI" ) OR LIMIT-TO ( SUBJAREA , "ENGI" ) OR LIMIT-TO ( SUBJAREA , "ECON" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) ).

Figure 3 presented below, illustrates the number of publications produced each year since 2005 until the present time. We can notice the prominent growth in the number of academic publications which start increasing drastically, from 2018 reaching a peak in 2021 proving evidence of the rising efforts made by academia to promote and enhance corporate sustainable with the conducion of numerous research on the integration of sustainable practices in corporate performance.

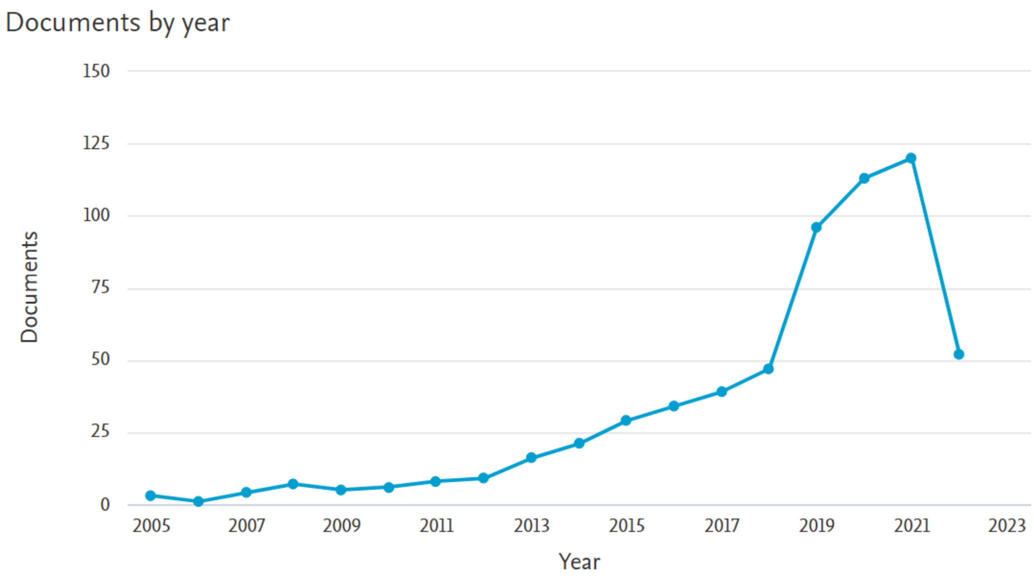


Figure 3. Documents published by year

After performing this initial search, the use of the VosViewer software enabled to provide a clear picture of the themes and trends in the existing literature creating 9 clusters of thematically related publications. The size of the theme of each cluster represents the importance of the cluster, consequently, a bigger size means that a major number of publications are thematically related to the topic.

We can differentiate among 9 relevant clusters: sustainability, corporate social responsibility, sustainable development, finantial performance, sustainable operations, firm performance, operations management, corporate sustainability and environmental management.

The first image additionally provides information about the timeliness of the publications whereas the second one shows the density regarding the number of publications thematically related .

In the first image the colours of the thematic clusters illustrate the timeliness of the publications, the yellow ones refer to the ones more recently published whereas the darkest tones of blue are assigned to the ones published before 2015 as we can see in the legend.

The second image shows the density of the publications in each cluster, revealing that the vast majority of the publications are thematically related to the clusters of sustainability, corporate social responsibility and sustainable development.

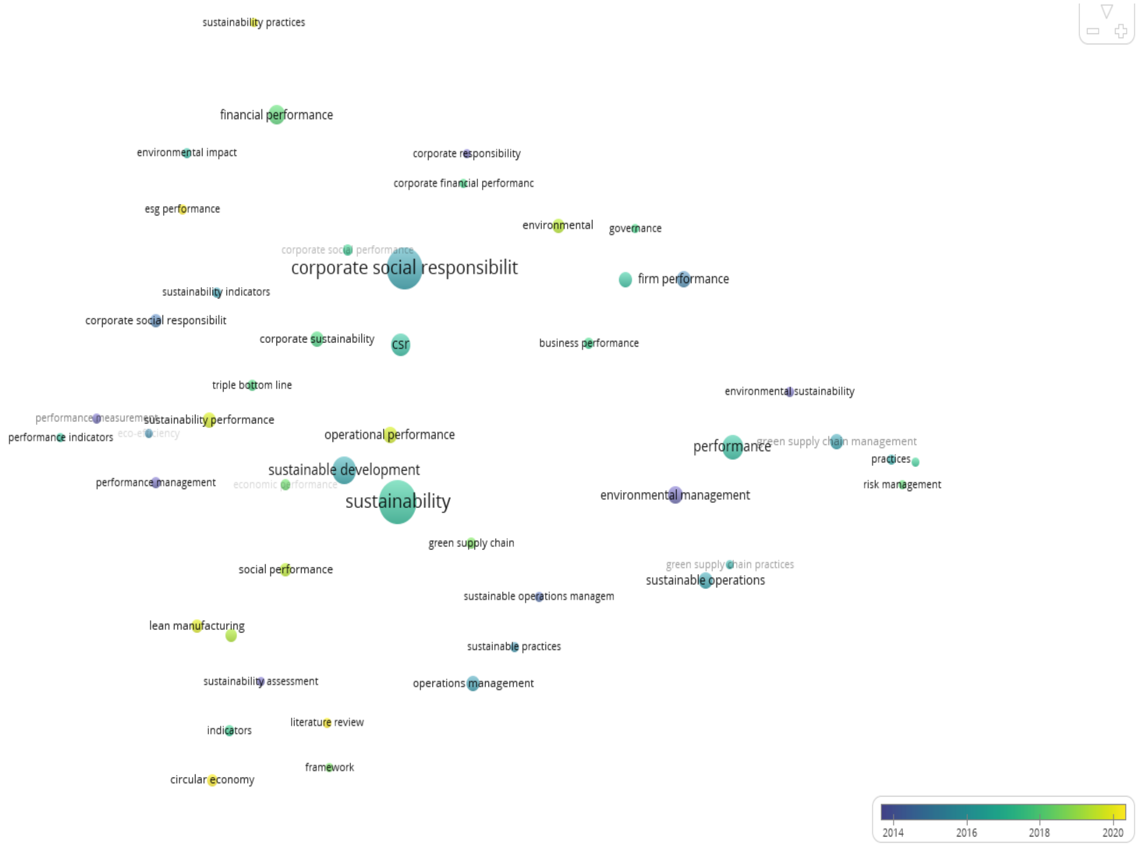


Figure 4. Timeliness of the thematically clustered publications

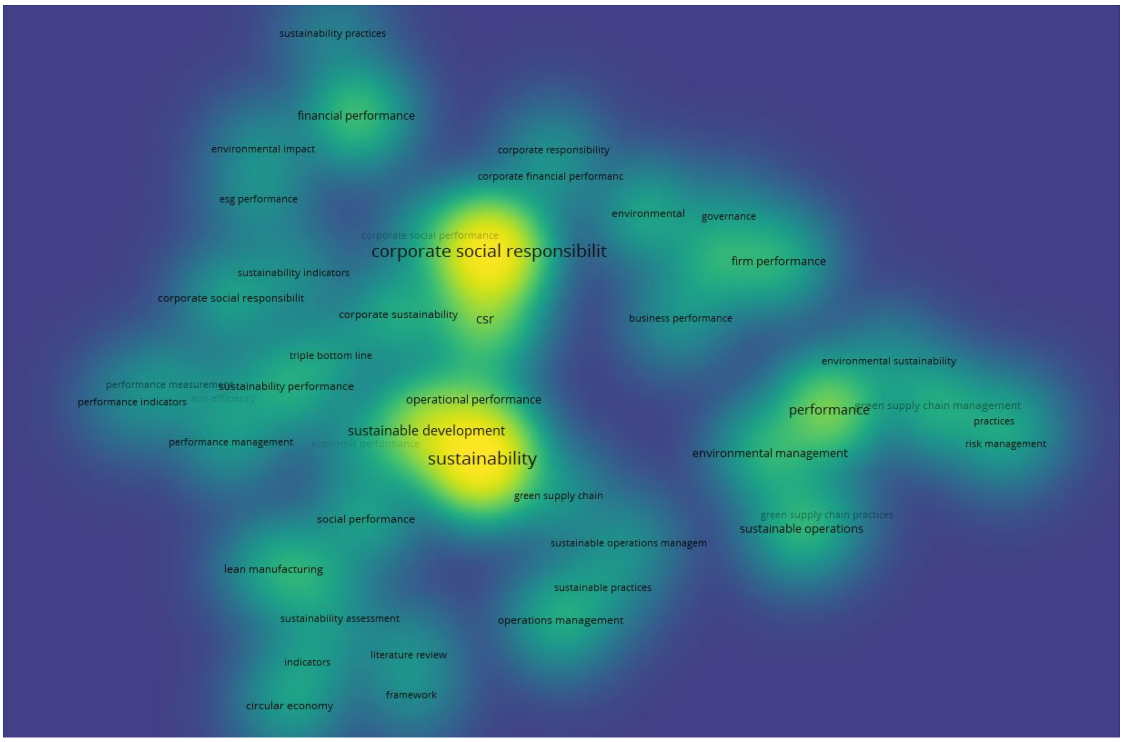


Figure 5. Density of the thematically clustered publications

### 2.3 Review methodology

The fist exclusion rule stablished that documents dated before 2019 and cited less than five times by other scholars could be disregarded as a way to measure the relevance and impact of their work in the further literature developed. Using Vosviewer software and introducing the threshold of minimum 5 citations enabled to reduce the initial sample of 610 to 329 documents.

The resulting documents after the first exclusion rule were divided in two groups: the ones dated before 2019 (175) and the rest published after that year (154). The first group was reduced through abstract-screening to 46 publications finally selecting by full-text screening 7 of them, useful for defining the theoretical background and conceptual foundations as well as synthesizing the main ideas in the existing literature and providing a general understanding of the topic treated and the context of the European framework in which the literature review analysis is developed.

As for the second group, it was also reduced through abstract screening to a final amount of 52 publications of which 22 of them were carefully selected through full-text screening with the aim of identifying gaps and new trends in the novel literature and pursuing the goal of generating critical views fundamented in updated information and a high level of knowledge of the actual times focusing in the challenges that enterprises nowadays have to overcome to successfully integrate ESG practices into their operations in a sustainable and efficient way.

The major reasons for disregarding a publication in the abstract and full-text screening phase can be summarized in the following table:

| Justification for the exclusion of publications in the screening phase |
|---|
| **Too specific:** the conclusions reached cannot be extrapolated to generate ideas and extract critical views for the literature review analysis because apply only for one specific sector of the industry, types of enterprises or a territory. The decision of the exclusion is not based on the level of concrete and specific but on the value and applicability of the conclusions and the information and data provided for the development of my literary review |
| **Geographically limited:** only valid for a geographical area whith determined characteristics or cultural and economic traits. |
| **Non-related topic:** the topic treated is not thematically related |
| **Similar content:** the content is not new or very similar to other publications that provide richer critical views or more updated data and information. |
| **Out of reach with my current knowledge:** difficult to understand the concepts treated or the methodology followed to reach the conclusions due to my level of knowledge and expertise in the matter |

Table 2. Overview of the selection criteria of the publications

## 2.4 Conclusions

The methodology adopted for the literary review analysis is the mixed literary review considered most suitable due to the fact that combines both systematic and conceptual searches.

The search protocol started from a bibliographic search in the scientific database of Scopus. The initial sample was reduced by the application of certain exclusion rules (timeliness and minimum of citations by other scholars) and afterwards it was reduced through abstract-screening in first place, and then full-text screening providing a definition of the criteria used for selecting or disregarding the publications of the remaining sample. This methodology opted for in the literary review analysis enabled us to both become more knowledgeable in the topic and obtain reproducle results, finally leading to the identification of the main trends present in the existing literature and the generation of critical views and extraction of unbiased and foundated conclusions.

The process of the search protocol is depicted in the figure below:

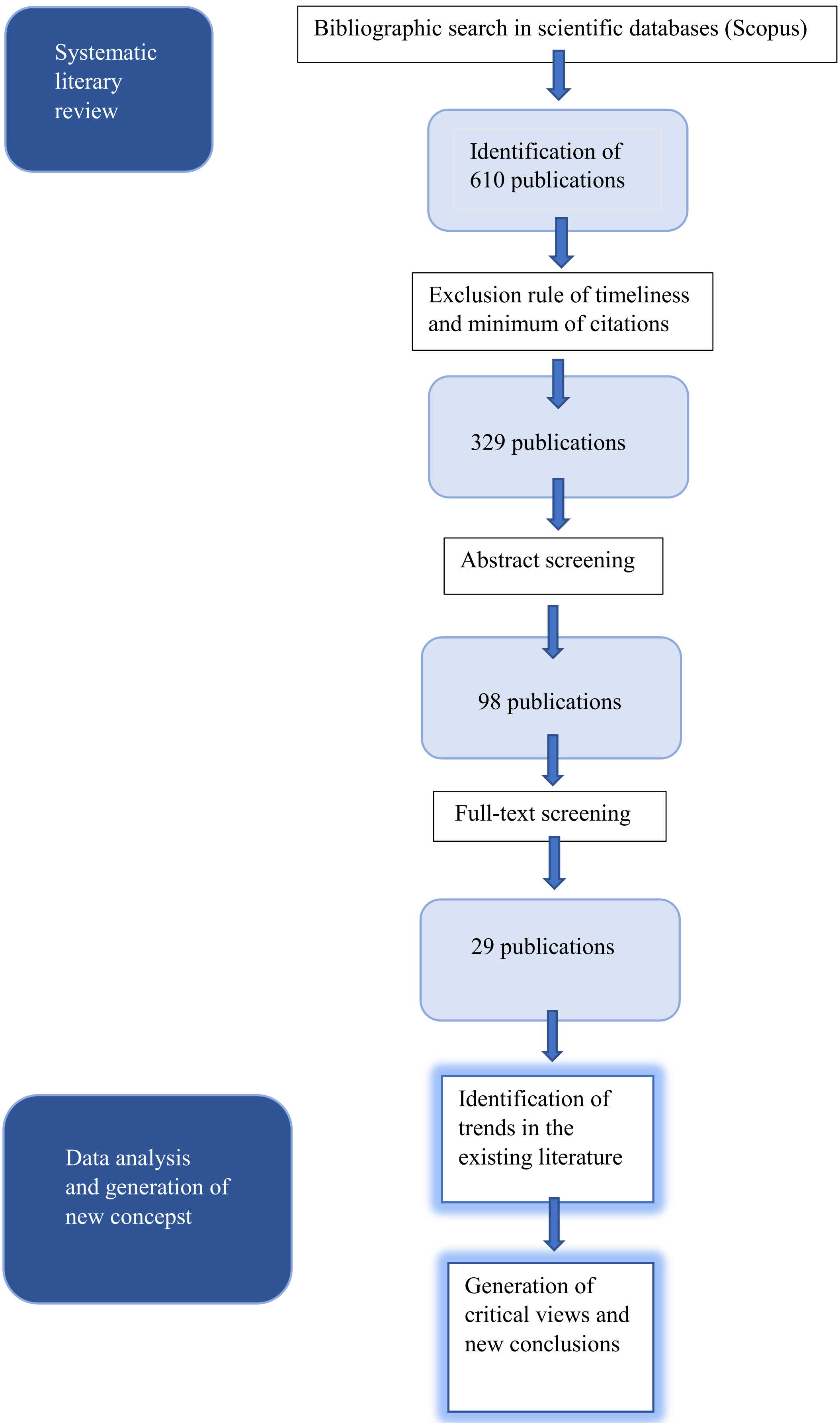




Figure 6. Methodology of the systematic literary review and analysis process

# 3. Integration of ESG practices in companies performance

## 3.1 Introduction

This third chapter examines the integration of ESG practices in corporate performance pursuing the objective of illustrating the importance and main benefits of ESG integration and evaluation for companies as well as providing a conceptual and practical framework to guide firms to successfully implement sustainable practices in their core operations and enabling the shift from traditional bussiness models to sustainable ones. The present chapter comprises the following subchapters:

1. The relevance and impacts of ESG practices integration in corporate performance.
2. Models for the integration of ESG practices in companies' operations.
3. Dimensions for the ESG practices integration and implementation in companies' operations
4. Evaluation of ESG corporate performance.

The first subchapter aims to provide an overview of the reasons why ESG integration is increasingly relevant for companies and the impacts of ESG integration in corporate performance. In order to achieve this goal, this section includes a review of the benefits reaped from incorporating sustainability in the business strategy and ESG integration identified in empirical research produced by scholars over the years.

The second subchapter pursues the conceptualization and categorization of the sustainable models for ESG integration in corporate performance by providing a deep understanding of the different archetypes and sustainable business models present in the existing literature. In contrast, the third subchapter treats ESG practices integration and implementation in companies' operations from a practical approach, following the structure of the work of Koç, Nawas and Muammer in their in 2019, *" Exploring organizational sustainability: Themes, functional areas and best practices".*

We opted for using this study as a reference to develop the third subchapter because it offered a new approach focusing on the practical implementation of sustainable practices in companies' operations. Instead of discussing theoretically the impacts of ESG integration and analysing the feasibility of it, the academic research of 2019 brings a practical perspective identifying the main organizational themes for sustainability, functional areas, and the best sustainable practices implemented by successful wordwilde firms.

In light of the increasing need for companies to be proactive in mitigating the effects of their corporate performance and generating value for society by the implementation of sustainable practices in their core operations, more effort has been made for the development of universal tools and global accepted taxonomies aimed at evaluating and measuring corporate sustainable performance to enhance the potential application of the conceptual models to integrate sustainability as well as to understand companies' practical limitations in the process of ESG integration and implementation in corporate operations. The subchapter regarding the evaluation of ESG corporate performance provides an insight on the different corporate sustainable systems (CSS) used to measure, assess and monitor the corporate sustainable performance. Furthermore, this last subchapter also highlights the importance of ESG disclosure and the production of non-financial periodic reportings in order to enable data about the fullfillment of sustainable goals and companies' compliance with the legislation in force fostering a continuous improvement in corporate sustainable performance.

## 3.2 The relevance and impacts of the integration of ESG practices in companies performance:

Sustainable development is without the shadow of a doubt one of the major challenges that the global economy is facing today .The adoption of ESG practices is the way for companies to operate within the sustainable development framework. (Martini, 2021)

Nowadays with major concerns arising regarding the adoption of sustainability in order to preserve the planet, companies are not only aware of the urgent need of reducing their impact but also of becoming proactive in integrating ESG practices into their core operations and performance.

The Global Sustainable Investment Review in 2020, placed ESG practices integration leading the ranking of the investment strategies of SRI that were experiencing remarkable growth at that time. (Alaa Aldowaish, 2022). As concluded by Ali Alshehhi, Haitham Nobanee and Nilesh Khare in their research conducted in 2018: "*The Impact of Sustainability Practices on Corporate Financial Performance: Literature Trends and Future Research Potential*" the integration of ESG practices is no longer a choice but a priority and a must for companies in order to develop robust business strategies to stay relevant in the increasing competitive and dynamic markets as well as to consolidate their success by abandoning the short-term financial focus and encompassing sustainable development. (Ali Alshehhi, 2018)

The adoption of ESG practices by companies is of vital importance for several main reasons related to long-term profitability and stability in the corporate finance, value creation, engagement and customer retention, outperformance of the competition and environmental and social benefits. (Witold Henisz, 2019). These advantages of integrating and implementing sustainable practices in corporate perfromance will be detailed and further discussed in the following chapter of the literary review.

The Organization for Economic Cooperation and Development (OECD) conducted surveys among 120 recognized firms in order to indentify the main drivers for ESG integration in corporate performance obtaining the following results depicted by the graphic: (Boffo, 2020)

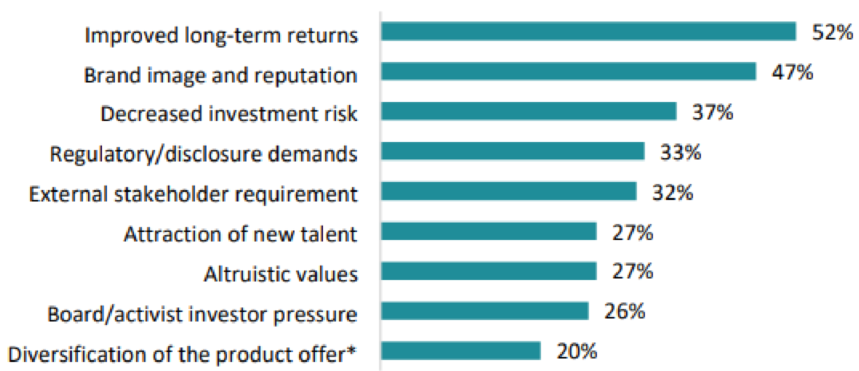


Figure 7. Main drivers of ESG integration in corporate performance

Source: (OECD)

The figure presented above illustrates that the main drivers for companies to integrate sustainable practices in their performance are related to the improvement of corporate finances in a long-term basis, the enhancement and consolidation of the brand image and firms' reputation as well as the decrease of the investment risk and the fullfillment of stakeholders demands and requirements, among others.

The aim of this subchapter is to expose solid arguments in favor of the increasing need for companies to integrate ESG practices into their core operations as well as to provide a foundated justification for the benefits that can be reaped in their performance by the adoption and implementation of the ESG practices.

As stated by Sang Kim and Zhichuan Li in their extensive study of 2021: *"Understanding the Impact of ESG Practices in Corporate Finance"*, there is evidence to support that the integration of ESG practices affects positively the corporate financial performance of the enterprises. More than 2000 empirical studies along the decades from 1970 to 2020 have been conducted to prove this hypothesis, resulting in the vast majority of them (over 90%) showing a positive correlation between integrating ESG practices in companies operations and obtaining more profitable and stable finances over time (Li, 2021). Only few studies concluded showing no relation or a negative effect, but the variability in the findings can be considered insignificant or irrelevant due to the fact that the negative results were mostly influenced by the size, industry or geographical area, specific characteristics of the companies and the particular economical context in which where inmersed, so these results were considered too specific and therefore, regarded as invalid for extending a generalized statement (Ibid).

It can be claimed that the implementation of corporate social responsibility (CSR) and ESG practices helps to ensure long-term profitability (obtaining higher equity returns) and stability reducing financial risk and improving firms' value. Sang Kim and Zhichuan Li formulated and confirmed an initial hypothesis: *ESG practices impact positively on corporate performance* in their extensive research. (Li, 2021) . Besides their work, a reliable amount of acedemic research reviewed in the existing literature also verified and supported this claim providing foundated justifications.

The adoption of Environmental practices stimulate companies to innovate operationally and technologically pursuing a more efficient and sustainable performance that often leads to a cost reduction and consequently to a improvement in the corporate profitability. The positive effect regarding the incorporation of social practices lays primarly in the enhancement of the companies' reputation and engagement of the customers, attracting new customers and retaining the old ones, deepening their relationship with the brand or service provided.

A second hypothesis was then formulated and proved by Sang Kim and Zhichuan Li: " *Among different ESG factors, governance category has the most significant impact on corporate finance performance"* in their literary review analysis, *"Understanding the impact of ESG practices in corporate performance",* (2021). Taking everything into consideration, it is vital to highlight that among the different ESG factors, corporate governance seems to have the major impact on enhancing the corporate finance performance, specially in the larger firms.

Gompers, Ishii and Metricks conducted an extensive research in 2003 and developed a governance index with the purpose of evaluating the positive impact of the corporate governance factor in the corporate financial performance, reaching the conclusion that firms scoring higher index values showed larger profitability and potential growth (Gompers, Ishii, & Metrick). Transparency in the decision-making process, the respect of the shareholder's rights, board independence and diversity and corporate ethics are the main reasons that explain the significant positive impact driven by the governance category of the ESG factors on corporate profitability reducing the risk for investors, attracting new ones while improving the financial performance and creating value. (Li, 2021)

Jun Xie,Wataru, Nozawa, Michiyuki Yagi, Hidemichi Fujii, and Shunsuke Managi proved a third hypotheis : "*Governance activities that involve an independent and diversified board of directors are positively related to corporate efficiency*" by the development of a regression model in their reasearch of 2018. Their extensive research revealed that in terms of board composition, board independence shows the major positive impact in corporate efficiency and significantly improves the firm's market value. Board independence argues for the presence of not connected directors of the board to the CEO and others executive board members. (Jun Xie, 2018)

Greater board independence not only enables to develop consistent business strategies and policies that address a wider range of stakeholders requirements, by preventing the CEO from making decisions based on reaping personal and economical benefits but also allows companies to gain more legitimacy and strengthen the customer's trust and loyalty to the firm. (Eduardo Ortas, 2017). As for the board diversity, promoting cultural and gender diversity often leads to a better corporate performance and is regarded as a good practice to reflect the corporate values and enhancing the firm's image by showing that any kind of discrimination in the workplace should be abolished. Ibid.

The compellence of the idea of adopting ESG practices as a key to ensure long-term companies success remains in the directly link with the increase on the potencial for value creation, differentiation and outperformance of the competence. (Witold Henisz, 2019)

As stated by Witold Henisz, Tim Koller, and Robin Nuttall in their research of 2019: "*ESG integration enables companies to create value in the following five ways regardless of the size, industry or geographical area in which they operate: Facilitating top-line growth, reducing costs, minimizing regulatory and legal interventions, increasing employee productivity and optimizing investment and capital expenditures*".

On the one hand, integrating successfully ESG practices into companies performance and their core operations often result in a differentiation in the market and outperformance of the company enabling the company to grasp new market niches or to expand into the existing ones. (Witold Henisz, 2019)

Adopting ESG practices and operating within the sustainable development framework not only can attrack B2B and B2C customers who are aligned with these principles and share the same values, but also enhances the relationships with the governments and authorities that are more prone to provide better access to resources, licenses or approvals as a reward for their trust in their corporate actions and commitment with the environment and the community in which they operate.

In a nutshell, implementing ESG practices becomes advantageous in the long-run and enables a prominent growth for several reasons previously mentioned, provided the execution is managed properly. (Sinziana Dorobantu, 2014)

On the other hand, another clear advantage of showing a strong value proposition through ESG adoption is the reduction of regulatory and legal interventions resulted from gaining governments support and trust that offer the companies more freedom and flexibility to operate and develop their business strategies. (Henisz, 2016)

As for the cost reduction, the main explanation lays in the optimization of resources, reducing all kinds of excess, minimizing energy consumption and water intake, reducing the generation of waste and recycling and recirculating both materials and products . Acting in accordance with the principles of sustainability, fosters efficiency and results in an optimized operating system of the companies that, consequently, leads to a significant cost reduction. (Witold Henisz, 2019)

Besides this, a strong ESG proposition is more likely to make the employees regard their work as a vital contribution to the community , deepening their sense of belonging and connection with the company in which their values can be reflected and in consequence, increasing their productivity and boosting their motivation to keep working giving their best. (Edmans, 2012)

The figure below shows the different ways in which the integration of ESG practices in comapnies' performance can create value, according to the research of Witold Henisz, Tim Koller, and Robin Nuttall in 2019:

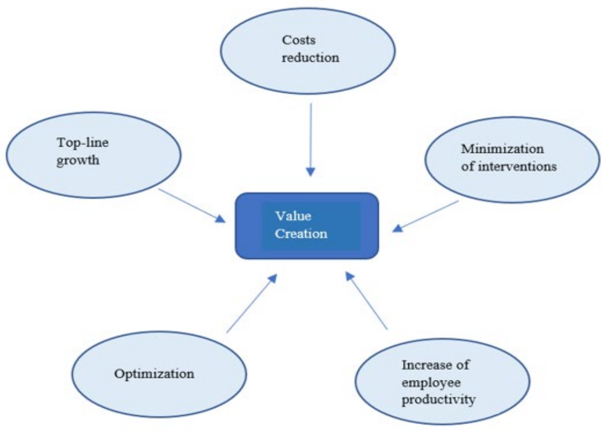


Figure 8. Five ways of value creation through the integration of ESG practices in companies operations

### 3.3 Models for integration and implementation of ESG practices in companies operations

The aim of this subchapter is to provide a theoretical framework for the integration and implementation of ESG practices in companies operations by conceptualizing the sustainable business models defined in the existing literature and providing a broader categorization of them.

Some of the most prominent researchers on sustainable business models have agreed on a common definition of this term as "*a business model that creates competitive advantage through superior customer value and contributes to a sustainable development of the company and society*". (Saeed Nosratabadi A. M., 2019) . Geissdoefer also defined sustainable business models as "*business models that incorporate proactive multi-stakeholder management, the creation of monetary and non-monetary value for a broad range of stakeholders and hold a long-term perspective*", considering sustainable business models as elements which interaction enables the potential creation, delivering and capture of sustainable value for its multi-stakeholders. Ibid.

The main challenge posed by the shift from traditional business models to sustainable business models lays in the design of an organization able to create and capture value not only with the aim of maximizing profits but also delivering social and environmental benefits. (Joaquin Sanchez-Planelles, 2020)

Much research during the recent years has been conducted on sustainable business model innovation and construction with the aim of enabling the firms' transition from traditional business models to sustainable ones.

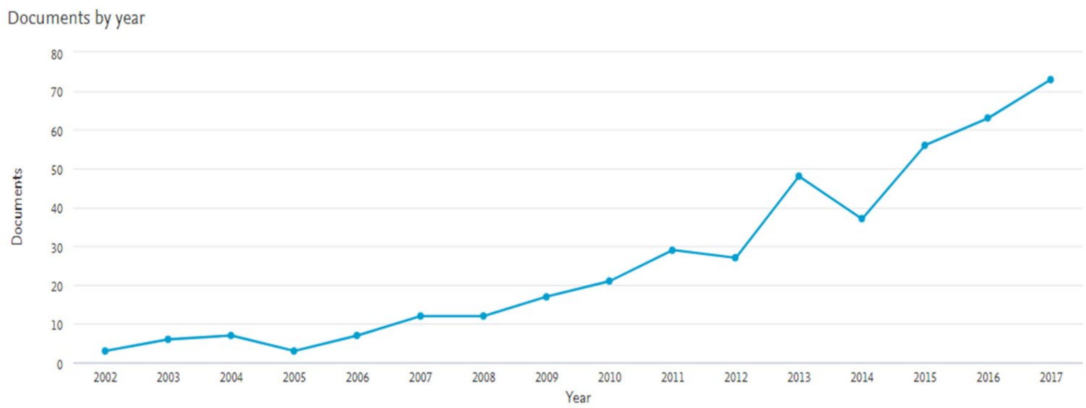


Figure 9. Number of publications on sustainable business models from 2001-2018

Source: Sustainable Business Models. A review, 2019

The figure presented above illustrates the increasing number of publications regarding sustainable business models in the period of time comprised between the years 2001- 2018. (Saeed Nosratabadi A. M., 2019).

Different approaches regarding the design of innovative sustainable business models are presented in the existing literature. However, the most common approach taken, sustains the ability to provide a sustainable value proposition to generate value for the environment, society and all stakeholders while ensuring profitable returns for the companies as the key for sustainable business models innovation. Other approaches have emerged recently in the literature, for the development of innovative sustainable business models such as the design of sustainable value creation, sustainable value delivering and sustainable B2B partnerships and collaboration. (Saeed Nosratabadi A. M., 2019)

Before analysing the different sustainable business models and their classification, a general overview of the main sustainable methodologies and tools will be presented. Sustainable methodologies are defined in this context as the methodologies and tools which objective is to enable sustainability integration within the business models.

A novel approach was introduced in 2016 regarding the design of sustainable business models by Joyce and Paquin. They adapted Osterwalder's Business model canvas giving birth to the Triple Layered Business Model Canvas, which considered the three main dimensions of sustainability: environmental, social and governance in order to generate and deliver environmental, social and economic benefits as well as to ease the shift from traditional business models to susainable business models. (Joyce & Paquin, 2016)

The triple layered business model canvas (TLBMC) is a tool that enables to explore and support sustainable-oriented business model innovation by integrating the triple bottom line perspective on sustainability. It constitutes an extended business model canvas expanding the economic-centred approach by incorporating the environmental and social layers built from life cycle and stakeholders perspectives with the aim of enabling innovation and facilitating the transformation of standard business models into sustainable business models. (Joyce & Paquin, 2016)

An example of a sustainable business model canvas template is presented below :

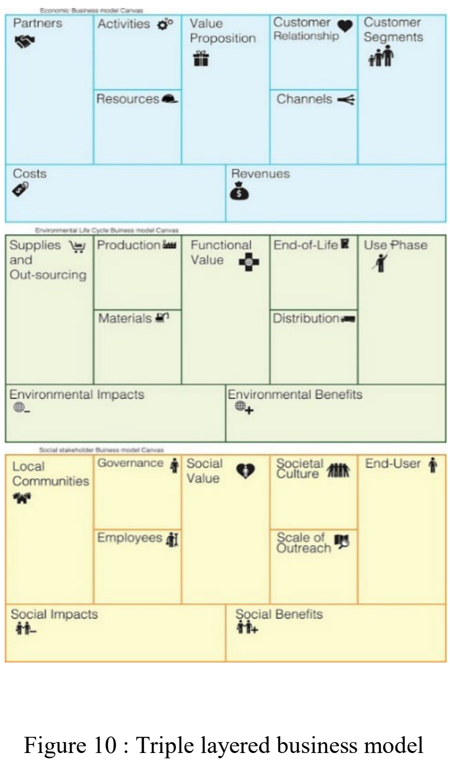


Figure 10 : Triple layered business model

Other sustainable tools and methodologies created to help to integrate sustainability into the business models also worth mentioning are the framework for strategic sustainable development and RESTART. The first one, analysis different business areas such as the value chain in order to develop actions for achieving sustainable goals inside the companies whereas RESTART outlines a new practical framework offering executives guidance and recommendations for companies and organizations to adopt sustainable business models. (Joaquin Sanchez-Planelles, 2020)

Sustainable business models can be classified according to different principles. The first classification proposed by Bocken, Short and Evans differentiates among three groups of sustainable business models: technological, social and organizational attending to the type of sustainable innovation developed (Bocken, Short, Rana, & Evans)

Archetypes included in the technological group entail innovations in design, processes and operational activities. Some examples of it would be maximizing energetical and material efficiency by lowering carbon emissions or optimizing manufacturing processes, creating value from waste applying the principles of circular economy, or moving from non-renewable sources to renewable energy sources. (Joaquin Sanchez-Planelles, 2020)

The innovations considered in the social archetypes are based on consumer behavior and offering, for example encouraging sufficiency through product longevity, delivering functionality rather than ownership, or adopting a result-oriented pay per use approach. Ibid.

Finally the organizational archetypes focuses on innovations oriented to changing the fiduciary responsabilities of companies shifting the purpose for society and the environment, adopting a not for profit mentality or developing scale up solutions such as crowd sourcing and crowd funding. (Bocken, Short, Rana, & Evans)

The table below aims to summarize the categorization into nine archetypes provided by Bocken, Short, Rana & Evans . The archetypes illustrate different examples of practices which are beneficial for each dimension of sustainability: (Isaac Lemus-Aguilar G. M.-A.-P., 2019)

| Focus | | Archetypes |
|---|---|---|
| Environment | (1) | Maximize material and energy efficiency |
| | (2) | Closing resource loops |
| | (3) | Substitute with renewables and natural processes |
| Social | (4) | Deliver functionality rather than ownership |
| | (5) | Adopt a stewardship role |
| | (6) | Encourage sufficiency |
| Economic | (7) | Repurpose for society/environment |
| | (8) | Develop sustainable scale-up solutions |
| | (9) | Inclusive value creation |

Table 3. Proposed sustainable business types

Source: Sustainable Business Models through the Lens of Organizational Design, 2019

According to the stream of revenues of the company and costumers' interactions with the products and services provided, another classification can be proposed dividing the sustainable business model into four differenciated categories: sustainable production, sustainable consumption, servitization and circular economy. (Joaquin Sanchez-Planelles, 2020)

We will proceed to highlight the principal traits of each existing sustainable business models, providing an overview of their strengths and weaknesses as well as analysing the possibility of their combination and interaction in practice.

Among the different existing sustainable business models, sustainable production and consumption are of particular interest, because it implies a transformation in the production and consumption mentality and the reshaping of the organizational structure. Although we make a distinction between sustainable production and consumption, both sustainable business models are frequently treated together and referred as SCP in the existing literature .

<u>Sustainable production</u>: refers to the creation of products and services by the utilization and implementation of systems and processes regarded as not only non-polluting and environmentally friendly, promoting the preservation of energy and natural resources, but also socially benefitial and creatively rewarding for the working force, safe and heathful for the employess, consumers and comunities and economically viable and feasible. (Lüdeke-Freund, 2010)

The aim of sustainable production is to ensure that the production of goods conserves resources and preserves the regenerative capacity of the environment. The sustainable production comprises not only the manufacturing phase but the whole life cycle of the product: procurement of raw materials, product development and design, production, distribution and logistics, product use and disposal and recycling. (Saeed Nosratabadi, 2019)

Sustainable product implementation offers numerous advantageous opportunities for companies such as cost reduction through improved materials and energy efficiency, competitive advantages over the market place, flexibility to adapt to shifts in consumer behavior, increase the attraction of skilled workers and ensuring long-term success. Ibid.

<u>Sustainable consumption:</u> refers to the decision-making process that involves the consideration of the consumer's viewpoint and needs in the consumption of products and services as well as the social and environmental effects of their decisions. It implies changing the consumption patterns infuenciating consumer behavior and helping in eco-friendly choice making. (Joaquin Sanchez-Planelles, 2020)

Ensuring sustainable consumption and production (SCP) has been one of the greatest challenge of global economy over the past fifty years. It constitutes the 12th sustainable development goal of responsible consumption and production. Sustainable consumption and production was first defined in 1972 by the UN as: *"The use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the need of future generations".*

SCP is a holistic approach built around three main objectives: decoupling environmental degradation from economic growth, applying life cycle thinking and sizing opportunities for developing countries. This approach focuses on delivering improved quality products and services reducing at the same time the environmental impact of its generation, optimizing and pursuing efficiency in every phase of the life cycle of the products, as well as on the contribution of developing countries opportunities creation and poverty eradication. (Commission, 2020).

It should be noted that the present ambiguity in the definition of the term SCP providing an umbrella for different meanings and approaches, constitutes a limitation in the practical implementation of the sustainable business models. (Southerton, 2015)

On the other hand, there is a growing attention placed by academia towards innovations in sustainable business models embracing the concept of servitization, in which the value of the product is not measured by its usage but for the service provided and delivered.

<u>Servitization</u>: aims at abandoning the traditional product-oriented business approach moving towards a service-oriented one. It shifts the primary focus from creating value by making and selling a product to creating value by delivering a service. Servitization as a business model creates value for manufacturers by adding services into offerings or fully transforming a product-based transaction model into a service-based subscription model. (Kowalkowski, Gebauer, Kamp, & Parry, 2017)

Some of the key drivers or motivators to adopt a servitization business models are related to cost savings, product differentiation, improved service quality offer, increased profitability and new revenue stream besides the reduction of the environmental footprint.. (Saeed Nosratabadi A. M., 2019)

Moving towards a servitization business model poses new challenges to manufacturers and companies since a change in the mindset is required regarding the timescale and value delivery, new capabilitites have to be designed and long-term risks and partnerships need to be envisaged in order to create and deliver value to customers through services. (Kowalkowski, Gebauer, Kamp, & Parry, 2017). Another important limitation is that the adoption of this sustainable business model is not appliable for all kind enterprises as the feasibility of the implementation depends on the nature of the companies as well as on the sector of the industry in which operates. Ibid.

Last but not least, special focus has been placed over the past years on the existing literature regarding the conceptualization of circular economy business models. The research conducted in 2019 by Saeed Nosratabadi reveals that circular business models as well as product service systems are the most analysed and widely discussed strategies in the literature regarding the design of sustainable business models.

<u>Circular economy</u>: seeks to replace linear production-consumption systems for circular systems reducing, reusing, recycling and recovering materials. Circular economy is defined by the European Parliament, as "*a model of production and consumption which is based on sharing, leasing, reusing, repairing, refurbishing and recycling pursuing the retention of materials within the productive use as long as possible with the aim of extending their life cycle and getting the maximum value from them*". (Parliament)

Among the benefits we can reap from circular economy business models it is important to highlight the contribution to sustainable business growth, the generation of new revenue and commercial opportunities, the transformation of business relationship's with customers and last but not least, the economy protection against the rising costs of the materials and resources shortages. (Kirchherr, Reike, & Hekkert, 2017)

Some examples of practices within the circular economy business models are listed below:

1. Incentivised return: based on offering customers financial rewards or other kind of incentives in exhange for the return of used products, enabling products to be resold or refurbished.
2. Hire and leasing: based on hiring and leasing products as an alternative to purchasing.
3. Collaborative consumption: based on the creation of peer-to-peer networks with the aim of enabling the rental and sharing between members of public organizations or private business.
4. Asset management: refers to the tracking of organization's assets with the objective of minimising new purchases and maximising products lifetime by reusing, repairing or redeploying at a different site.
5. Long life: based on the design of long life products through supported guarantees and trusted repairs.
6. Performance/ service systems: refers to delivering a service based on the performance outcomes of the product in which the manufacturer interest in producing a lasting product is increased by the retention of ownership and a major control over the production of the product.

Circular economy and SCP are tightly connected and directly linked as circular economy embraces the principles of sustainable production and consumption throughout all the stages of the life cycle of the product.

The contribution made by Saeed Nosratabadi, Amir Mosavi, Shahaboddin Shamshirband, Edmundas Kazimieras Zavadskas, Andry Rakotonirainy, and Kwok Wing Chau in their sustainable business models' literary review lays on the presentation of the application of sustainable business models identifying different industries, sectors, and research areas, providing a classification into specific application categories: innovation, management and marketing, entrepeneurship, energy, fashion industry, healthcare industry, agri-food, supply chain management, circular economy, developing countries, construction, engineering and the hospitality industry. (Saeed Nosratabadi A. M., 2019).

Circular economy is the sustainable business model adopted to provide sustainable performance in many sectors of the industry but most specially in the area of sustainable supply chain management, as the collaboration between procurers and suppliers leads to reaping economic benefits by the reduction in the use of raw materiales and waste generation, mitigating corporate environmental impacts and ensuring the development of companies operations in a sustainable framework. Ibid.

A broader insight of circular economy will be provided in the following chapter regarding the dimensions of the integration and implementation of ESG practices in companies operations. Meanwhile, before placing the focus on the practical approach , this present chapter has served the purpose of building and stablishing the theoretical framework on sustainability, conceptualizing and categorizing the different sustainable business models attending to different principles of classification, analysing their main traits, possible interactions and current limitations based on the knowledge acquired from the review of the existing literature.

In a nutshell, several approaches are presented and analysed in the existing literature regarding the design of sustainable business models, which comprise innovation in the design of sustainable value proposition, sustainable value creation, sustainable value delivering as well as the stablishment of sustainable partnerships networks aimed at generating value, meeting stakeholders needs and expectations while providing environmental, social and economic benefits. While it is true that numerous publications provide insights into the conceptualization and classification of sustainable business models, there is a knowledge gap in regard of the analysis of the corporate transition process from traditional business models to sustainable models and consequently practitioners struggle to implement successfully sustainable practices in companies operations.

### 3.4 Dimensions of the ESG practices integration and mplementation in companies operations

From the analysis of the existing literature it can be claimed that ESG integration is treated from two different perspectives, on the one hand, SRI perspective and from the sustainable development viewpoint, on the other hand. Moreover, the vast majority of the literature focuses on ESG integration in the business model as an outcome, providing information and critical views on the advantages, feasibility and impacts in the corporate financial performance, rather than analysing the integration process itself in companies core operations. (Alaa Aldowaish, 2022)

The recent research of Alaa Aldowaish has revealed the knowledge gap in the existing literature regarding the impact of ESG integration into the business models, specially in the integration process, claiming that to date, only few studies have examined the impact of integrating ESG practices in the firms' operations and merely from a conceptual approach. Furthermore, having contrasted this viewpoint with many different conclusions reached in other contemporary studies, it should be highlighted that this claim does not constitute an isolated concern among the academia, in fact, there is a shared proposition for this topic to become a future line of research. (Iain MacNeil, 2022)

Although there is a wide range of research among the academia providing a conceptual framework and definition of the different sustainable business models, there is an undeniable need to conduct more studies with the focus placed on the practical applicability and the implementation of ESG practices in order to encourage firms to review and reform their business models to operate within the sustainable development framework. (Alaa Aldowaish, 2022). Reshaping the business strategy adopting ESG practices and remodelling traditional business models to become sustainable companies, will enable firms to outperform their competitors, penetrate new market niches, target new customers, innovate their products and services offered, create value, enhance firms reputation, improve their financial performance and ensure their success in a long-term basis. Ibid.

This chapter aims to create a synergy between theory and practice, describing the main functional areas identified in the existing literature and defining the best practices to integrate ESG in companies operations with the purpose of fostering sustainable performance. This approach not only will enable to deepen in the conceptual understanding of the theoretical models but also to identify and recognize the practical limits of ESG integration and implementation providing a realistic and accurate description of the challenges to overcome by firms in the present and forthcoming future.

We opted for using the research of Waqas Nawaz and Muammer Koç as a model to develop the subchapter regarding the dimensions of ESG integration and implementation in companies' operations, since it was identified in the literature review analysis as an emergent trend in the existing literature offering a shift in the approach of ESG integration, proving guidance for enterprises on how to successfully integrate and implement ESG practices from a practical point of view.

Waqas Nawaz and Muammer Koç conducted an extensive research on sustainable best practices with the aim of constructing a practical framework to support the existing theoretical and conceptual models about ESG practices integration. To achieve this goal they analysed the 100 most sustainable organizations that were included in the Global 100 ranking of 2017 by Corporate Knights, a high reputated ranking that publishes the 100 most sustainable corporations every year.

Corporate Knights have been ranking the world's 100 most sutainable corporations since 2005. The annual Global 100 ranking is based on a rigorous assessment of public companies with revenue over US$ 1 billion. https://www.corporateknights.com/rankings/global-100-rankings/

After defining the optimal selection criteria and eliminating all the emerging constraints, they were able to identify nine main themes on which the most sustainable firms focus to improve and outperform the competition and defined the best sustainable practices for each theme that could be applied and reproduced by every company regardless of their nature, size, sector of the industry and economical context in which they operate. (Koç, 2019)

The nine main themes are the following: resource optimization and minimization of waste and emissions, business and operational excellence, corporate citizenship and social development, research and innovation; procurement, supply chain, and logistics, governance, sustainability management tools; employee relations, and health, wellness, safety, and security.

During the course of this chapter a deeper analysis will be provided to reflect on the best practices adopted by the most successful sustainable companies focusing on each main organizational theme and their corresponding functional areas in order to facilitate practical guidelines for the integration and implementation of ESG practices in the corporate performance.

### *3.4.1- Resource optimization and minimization of waste and emissions*:

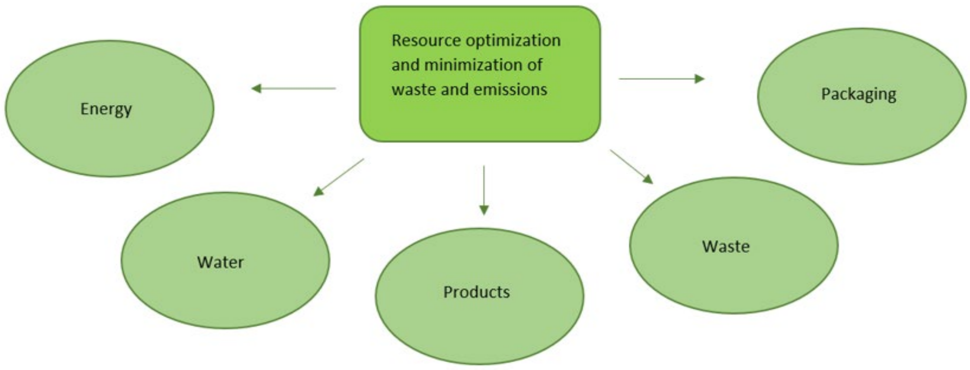


Figure 11 . Functional areas of " Resource optimization and minimization of waste and emissions"

Optimizing and maximizing the efficiency in the different functional areas of the company not only contributes to sustainability by being more environmentally-friendly but also creates social value, enhances the firms reputation and reflects positively in the corporate finance performance by reducing the fixed costs and using the minimum resources in their operations.

As shown in figure 11 above, regarding the first functional area the main objective is to reduce the energy consumption and the environmental footprint. The best practices to adopt are the implementation of energy policies to regulate, control and increase the efficiency of the energetical use, the movement from non-renewable to renewable sources to lower $CO_2$ and other pollutant emissions, and the optimization of energy-intensive operations.

Good examples to reduce energy consumption and maximize the efficiency inside the companies could be replacing of all the traditional lights by Leds, monitoring by threashold the temperature of air conditioning and freezers, or ensuring that the equipment and systems are properly maintained and switched off when not used.

Figure 11 also refers to water consumption, which aim is also to reduce the water intake by recycling the waste water or reusing discharged water. This could be achieved by installing more efficient taps, implanting filtering systems to clean the waste water or designing rainwater storage facilities.

Nowadays with rising environmental concerns, it has become of vital importance for companies to develop a solid Environmental Management System (EMS) recognized and certified by an authorized body with the purpose of mitigating their environmental impact, responding to the increasing customer's demand for greater environmental credibility and operating within the sustainable development framework. This larger commitment shown by companies in recent times to reduce the environmental footprint has been reflected in the 5.5% increase in worldwide ISO 14001 certificates granted in 2020. (ISO)

ISO 14001: 2015 are internationally agreed standards that set the requirements and criteria for companies to obtain a recognized Environmental Management System (EMS) certification. The Environmental Management System is defined by the International Organization for Standarization (ISO) as *"the part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving and reviewing the environmental policy of an organization."* In a nutshell, an ISO 14001 environmental management system (or commonly referred to as an EMS) is a structured system designed to help organisations manage their environmental impacts and improve their operational efficiency. It provides the structure to environmental management and covers areas such as training, record management, inspections, objectives and policies.

These set of standards are appliable to any kind of organization regardless of its nature, type and size and were developed by the International Organization of Standarization with the aim of assisting companies in the continuous measurement and improvement of their environmental performance as well as ensuring the compliance with the prevailing legistation.


Figure 12. UNI ISO 14001:2015


Figure 13. ISO 14001 EMS framework

In order to obtain the EMS certification companies need to undergo an external audit conducted by an accredited certification body to examine and verify the compliance with ISO 14001 requirements.

Figure 14 depicts a serial of steps that are required to be completed by an organization aiming to implement an environmental management system (EMS) . However, the development of an EMS cannot be regarded as a sequencial process but is rather considered a continuous improvement cycle inside the companies or organizations.


Figure 14. Steps for the implementation of an Environmental Management System

An EMS helps organizations not only to enhance their environmental performance by the promotion of an efficient use and a reduction of waste of the companies resources, but also enables them to create competitive advantage by gaining the stakeholders' trust.

The benefits reaped by the acquisition of an EMS and ISO 14001 certification are numerous and will be summarized below in the following table:

| **Gains from an EMS certification:** |
| --- |
| Improvement in resource efficiency and environmental risk management |
| Reductions in energy and water consumption,waste and carbon emissions |
| Enhancement of the corporate financial performance and costs reductions |
| Gain competitive advantage in supply chain design |
| Increase new business opportunities |
| Improve overall environmental impact |
| Management consistently of environmental obligations |
| Strengthen stakeholder and customer trust through environmental credibility |
| Bolstering employee satisfaction as environmental stewards |
| Provide assurance of continuous measurement and monitoring of environmental impact |
| Show commitment for continuous improvement |
| Assurance of compliance with the legislations in force |
| Improvement of corporate responsibility |
| Promotion of corporate sustainable performance |
| Attraction of potential investments |

Table 4. Benefits from the adoption of EMS

Source: International Organization for Standardization (ISO)

The products functional areas depicted in the figure 11 above and focuses on producing and developing products more environmentally friendly with the search of new materials or by redesigning them to be more environmentally efficient. It is also a good practice to audit for ecocertificates and acquiring ecolabelling recognition on the companies produts because apart from contributing environmentally it also creates value, enhances the firms reputation, attracts new customers and increases stakeholder's engagement. (Cláudia Silva, 2020)

ISO 9001 sets out the criteria for a quality management system . ISO 9001 ensures that companies provide good quality products and services to their customers. (ISO) As for the ecolabelling practice, it refers to another voluntary method of environmental performance certification which identifies and distinguishes environmentally products or services within a specific category. The EU Ecolabel stablishes the criteria for the products in order to minimize and mitigate their main environmental impacts over their entire life cycle. These criteria are developed by experts in the field in conjunction with key stakeholders of the industry and taking into consideration the consumer's opinion in order to provide a tailored criteria for each type of product. The criteria are revised and updated periodically with the aim of keeping up with technical innovations and guaranteeing that the products and services are respectful with the latest environmental standards besides ensuring high quality. (Commission, 2020)

Figure 15. EU ecolabel

As shown in the figure 11, the waste management is also an essential functional area and its optimization is based on avoiding unnecessary waste in first place, for example avoiding single-use items. The best practices to reduce the waste production are recycling the waste or donating them to other organizations that could take advantage of it and give them another use. For example, banning the single-use plastic items enabled Adidas to avoid around 40 tons of plastic per year. Another example that illustrates these good practices is M&S, that has been collecting since 2008 around 20 million donated items, worth £16 million, which was used to fund poverty eradication projects of United Nations . It is also interesting to give customers the possibility to return their used items to selected stores offering a reward or incentive for their contribution. (Koç, 2019)

The packaging functional area also presented in the figure 15, comprises the reduction of the product packaging and the replacement of packaging materials for biomaterials or recycled ones, specially avoiding plastic in order to contribute to the mitigation of the environmental footprint. As a example of good practice it is worth mentioning that Adidas replaced the use of plastic bags at its stores with recyclable paper bag, eliminating the use of 70 million plastic bags in Adidas per year. Generally speaking, companies such as RB or Henkel are aware of the importance to reduce product packaging and substituting the materials for environmentally-friendly ones and are working in collaboration with their suppliers to achieve this goal.

It is vital to highlight in this first theme of organizational sustainability , that circular economy is a sustainable business model, based precisely on resource optimization and the minimization of waste and emissions, as detailed in the previous chapter regarding the conceptualization of sustainable business models.

Circular economy is defined by the European Parliament, as a model of production and consumption which is based on sharing, leasing, reusing, repairing, refurbishing and recycling materials and products as long as possible with the aim of extending the life cycle of products. (Parliament)

It seeks to move from the traditional linear model based on a take-make-consume-throw away pattern to replace it for circular systems reducing, reusing, recycling and recovering materials. (Joaquin Sanchez-Planelles, 2020)

The benefits that can be reaped from adopting a circular economy business model are numerous: the reduction of the environmental footprint, the sucurity of the supply of raw materials, value creation for customers who will save money in the long-term due to the fact that will be provided with more perdurable and innovative products, the increase of companies competitiveness and the stimulation for innovation and potential economic growth, among others. (Urbinati A, 2020).

This model relies on large quantities of cheap, easily accessible materials and energy. (Isaac Lemus-Aguilar) Not only reduces waste to a minimum by recirculating them once the products reach the end of their life, but it also lowers CO2 emissions by avoiding and limiting the extraction of raw materials, which have a major impact on the environment. Nowadays the EU is placing the focus on developing measures in order to ease and accelerate the transition towards a circular economy, with the creation of a circular economy action plan in 2020 and the adoption of the first package of measures in march of 2022. The EU stated: *“ Currently, the production of materials we use every day account for 45% of the CO2 emissions. Measures such as waste prevention, ecodesign and re-use not only can save EU companies money but also reduces their total annual greenhouse emissions”.*


Figure 16. Circular economy principles

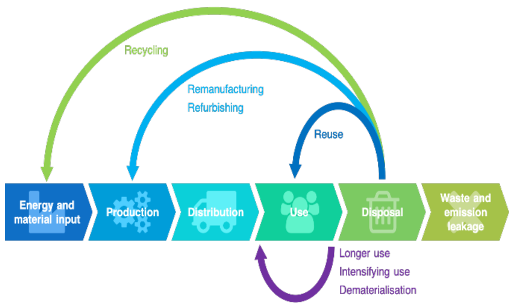


Figure 17. Circular economy process

In a nutshell, it can be concluded that the adoption of a circular economy business model by companies, the acquisition of an Environmental Management System (EMS) and other kinds of ecocertificates and ecolabels regulated by the ISO, constitute the most significant practices to detect areas for improvement in corporate performance placing the focus on resource optimization and minimization of waste and emissions.

### *3.4.2- Business and operational excellence:*

An optimal performance in the functional areas conforming the theme of business and operational excellence enables companies to fulfill their main objective, making profit but differentiating them from the rest of the firms through an increase in the monitoring practices which leads to a reduction of operational errors, an improvement in the offerings to provide more satisfaction to their customers and the creation of more business opportunities as a consequence of an enhancement in their corporate reputation. (Koç, 2019)

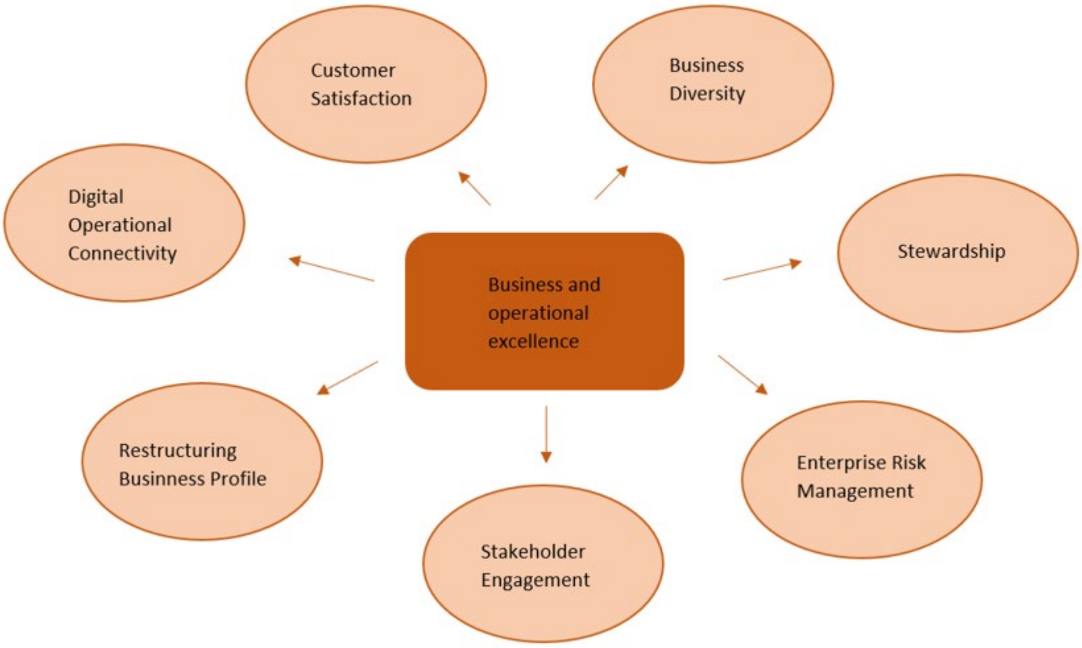


Figure 18. Functional areas of " Business and Operational Excellence"

Firstly, it is vital to highlight the importance of stakeholders engagement in order to meet their needs and expectations as well as address their main concerns regarding the companies operations and project management. Gaining stakeholders trust by making them feel involved and listened repercutes positively in the companies' performance and is an essential factor to consider in order to ensure the company succes in the long-term.

The functional area of the enterprise risk management places the focus on evaluating and the risks and opportunities of the company prior starting a new project or shifting the direction of the firms internal policies. To pursue corporate sustainability it is crutial to consider ESG factors into the traditional financial risk analysis. (Ali Alshehhi, 2018) Another good practice performed by the most successful sustainable organizations according to the analysis carried out by Waqas Nawaz and Muammer Koç is to assess the companies reputation by periodically conducting reports to their more loyal customers.

Offering business diversity providing a wide range of products specially sustainable ones is considered one of the most effective practice to create value through customer satisfaction, a ensuring the retention and attraction of new customers. (Koç, 2019)

The extensive study showed that another relevant common trait among the most successful sustainable companies is a strong stewardship or in other words, the commitment to hold reponisibility at any stage of the design, production and sailing processes.

Last but not least, the digital operational connectivity functional area refers to the use of digital connectivity to optimize the companies operations as well as enhanceing the montoring and control processes to reduce operational errors. Ibid.

### *3.4.3- Corporate Citizenship and Social Development:*

Corporate citizenship can be defined as: *" the recognition that a business or corporation holds social, cultural and environmental responsibilities to the community where it operates as well as economic and financial duties with their shareholders and stakeholders".* (Wayne State University)

Responsible corporations not only comply with the law and regulations to legally operate within a community but also pursue the goal of having a significant impact on people's lives , enhancing the quality of life, fighting unfairness and adversity and empowering the population that conform the community, besides just focusing on growing financially and making profits. (Nicolescu, 2021)

Placing corporate citizenship and social development at the center of the companies core operations bring numerous advantages such as strenghtening their public relationships with other institutions and organizations, deepening the relation with the community and boosting the brand image . (Ibid)

The figure 19 presented below illustrates the three main functional areas regarding the theme of corporate citizenship and social development:

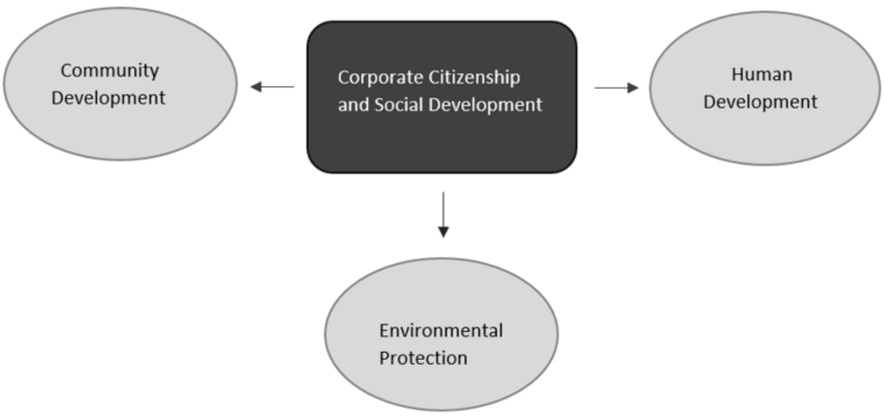


Figure 19. Functional areas of " Corporate Citizenship and Social Development"

Identifying and providing solutions for internal problems in the community in which the companies operate, making donations or promoting charitable work as well as helping local businesses are the most relevant practices to ensure community developing.

On the other hand, empowering people to fulfill their potential, financing eduactional programs or providing internships and fostering talent exploitation are key practices that promote human development within th community.

The environmental protection is gaining vital importance nowadays with the increasing raising awareness to take action in the mitigation of climate change, depletion of natural resources, deforestation, rising temperatures, ecosystems alteration, extinction of species and other global challenges. Companies are expected to be committed to respect the environment reducing its footprint and lowering their impacts in first place as well as being proactive in adopting measures to mitigate and compensate the unavoidable impacts resulting from their operations. The focus of this functional area is placed on the preservation of the physical environment and the ensurement of the well-being in the communities in which the company operates. This perspective differs from the approach taken in the first organizational sustainable theme where the reduction of the environmental footprint results from the optimization of companies resources and maximization of the efficiency in their operations and not from a expressed commitment to preserve the environment and mitigate the effects of their coporate perfromance.

### *3.4.4-Research and Innovation:*

Allocating money and resources of the company to research and innovation is considered in the existing literature to be of a worthy inversion and opportunity to ensure the companies success in the long-term paradigm as it enables companies to keep the pace with the changing needs of society and dynamic markets. Technological breakthroughs and disruptive innovation allows companies to stay competitive, outperform the competence, exploit new markets , create value and embrace future challenges. (Adams, 2015)

Several approaches to innovation in integrating and implementing sustainability in coporate performance are worth mentioning:

On the one hand, the line of research of sustainability-oriented innovation encompasses the creation of new business models as well as the modification of business processes and practices to serve the purpose of creating and realizing social and environmental value besides the generation of profitable economic returns. (Adams, 2015). With this innovative approach companies define and develop plans of actions interactioning with the stakeholders to create and deliver value through sustainability. However, the boundaries and scope of this line of research are blurred in the exisitng literature.

On the other hand, nowadays the so called concept of eco-innovation constitutes the largest field of research in ESG integration and implementation of sustainable practices in companies operations.

The term of eco-innovation is defined by the European Commission as: *"all forms of innovation (technological and non-technological) that create business opportunities and benefit the environment by preventing or reducing their impact as well as optimising the use of resources."* (Commission, 2020).

The EU developed the Eco-Innovation Action Plan (EcoAp) in 2020 with the aim of identifying the opportunities to achieve environmental goals through innovation.

The Eco-Innovation Action Plan comprises seven targeted actions particularly focused on market demand and supply, research and industry and on policy and financial instruments, to bring together stakeholders, private and public sectors and the European Commission.


Figure 20. Eco-Innovation Action Plan

Eco-innovation  can be also  defined as innovation on products, processes, services, management, or business models that leads toan improvement of the economic and environmental performance. (Rene, 2010)

Eco-innovation can be classified in two types: external and internal eco-innovation.  External eco-innovation comprises all sustainable activities that include the relationship between the company and its stakeholders whereas internal eco-innovation considers the practices developed to efficiently manage and integrate eco-innovation processes in the company performance. According to the eco-innovation practice area of implementation  we can differentiate three types of eco-innovation: eco-process innovation, eco-product innovation and eco-organizational innovation. (Joaquin Sanchez-Planelles, 2020)

The first one refers to the reformation of operational processes and systems to limit and reduce the environmental impact, the second one  focuses on reducing the environmental resulted from the phases of the lifecycle of the product, elaboration, production,distribution and consumtion and finally the third one  includes the managerial efforts to integrate eco-process and eco-product innovation in every department of the company.  Ibid.

The figure below provides a graphical representation of the main functional areas for improvement in the organizational theme of sustainability of research and innovation:

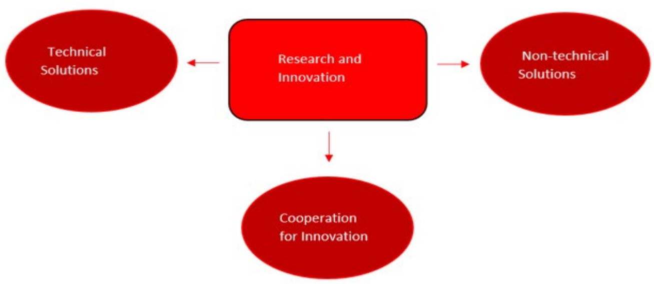


Figure 21.  Functional areas of “ Research and Innovation”

In a nutshell, offering innovative products and services, encouraging employees to think outside the box rewarding and recognizing originality in the ideas , promoting disruptive innovation and expanding the companies partnerships are considered good practices to boost research and innovation in corporate performance.

### *3.4.5- Procurement, Supply Chain, Logistics:*

Integrating sustainable practices in the procurement, supply chain and logistics theme really makes a difference and notably contribute to the enhancement of the sustainable performance of the companies. It comprises four functional areas: sourcing, suppliers's sustainability, logistics and domestics purchases.

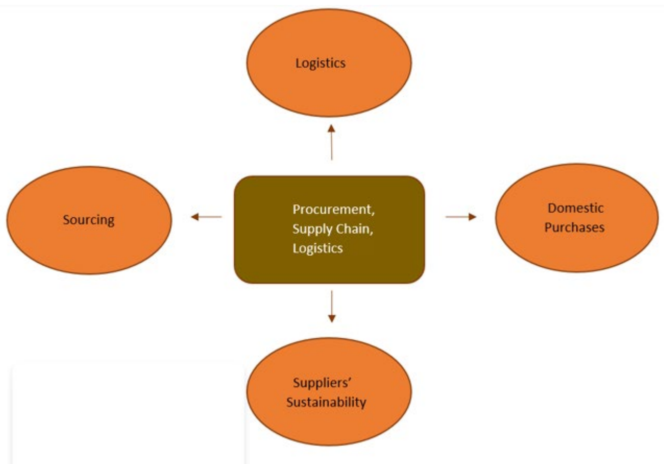


Figure 22. Functional areas of "Procurement, Supply Chain and Logistics"

Nowadays, corporations are fully aware of the importance of the collaboration with the members of the supply chain and the need to ensure the compliance of suppliers' actions with the vision, programs, values and policies of the company in order to achieve organizational sustainability. (Koç, 2019)

There is a growing perception that companies are at least partially accountable for suppliers practices affecting directly on the firms reputation. Therefore, it is auspicable that suppliers align with the companies environmental liabilities and sustainable practices. (Hussain Ali Mohammed Barham Ba Omara, 2019)

Green Supply Chain Management (GSCM) is defined by Srivastava as: *"the integration of sustainable environmental, involving material selection and sourcing, product design, manufacturing operations, provision of final good to the end users, and disposal of product after its expiration*" (Srivastava, 2007). Sustainable supply chain management addresses economic, environmental, and social concerns for the management of material, information and capital flows along the supply chain (María Jesús Muñoz-Torres, 2018)

Since the concept was born it has been gaining major imporance over the year and in the actual times is regarded as an essential practice to ensure corporate sustainable performance. Assigning sustainable goals and periodically evaluating suppliers compliance with them is a common practice performed by the most successful sustainable corporations as concluded in the extensive research of Waqas Nawaz and Muammer Koç (2019).

On the other hand, logistics is an essential functional area in which the company has major control to adopt sustainable practices. Sustainable logistics inevitably lead to an optimization in the delivering of goods and services and employees transportation, as well as to a reduction of emissions and environmental impact and improvement of thre corporate financial performance.

Using more fuel-efficient vehicles to reduce the level of emissions, managing shipping volume to decrease the load on the vehicles, and integrating reverse logistics to optimize the routing are the main sustainable practices adopted by companies to improve their sustainable performance in this functional area.

Reverse logistics can be defined according to The Council of Logistics Management, as *"the process of implementing, controlling, and planning the cost-effective flow of finished goods, raw materials, and in-process inventory. The flow goes from the point of consumption to the point of origin, aiming at properly dispose these or recapture value."*

Some reverse logistics examples comprises the return of goods by customers, remanufacturing of goods from returned or defective items, repairs and maintenance, the return of unsold goods and reselling to secondary markets, the refurbishment of goods, the reuse of packaging, or the recycling and disposal of end-life goods. Oracle stated in 2020 that *"worldwide, returns are worth over a trillion of euros every year and have become increasingly common with the growth of ecommerce"*

Traditional logistics flow start with suppliers and progess on to factories and manufacturers, until reaching the distributors. From there, the goods move to retails and finally to the customer. Whereas reverse logistics move in the opposite direction starting from the end customer, recapturing value through the return of products at any point of the supply chain.

The reverse logistic flow is represented and compared to the traditional forward logistics in the figures below.

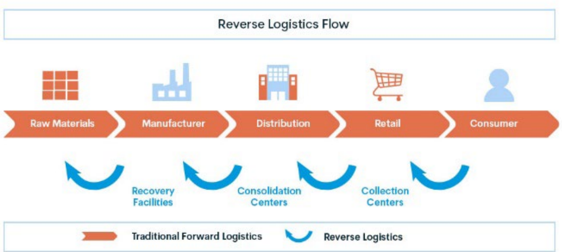


Figure 23. Comparison between traditional and reverse logistics flow

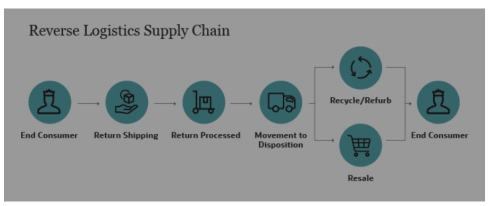


Figure 24. Reverse Logistics

Successful sustainable recognized corporations also participate in global initiatives to support sustainable sources and ban material sourcing from territories that use unethical practices or are involved in bellic conflicts. Nawaz and Koç stressed also the importance of promoting domestic purchase in their literary review of 2019 in order to help and boost local commerce and employment within the community in wich the companies operate. (Koç, 2019)

### *3.4.6- Governance:*

In the previous chapter of the literary review it was claimed that among the different ESG factors, corporate governance is the one that has major impact and affects more positively to the corporate finances and its sustainable performance. A strong governance is vital to deliver strategy alignment with sustainable principles as well as to provide a clear direction and leadership for ensuring corporate sustainable performance and long-term success consolidation.

In the past recent years, several International institutions and organizations have developed different initiatives to integrate corporate sustainability into company management processes and policies pursuing sustainable corporate governance. The European Commission developed in 2001 the Green Paper to promote corporate social responsibility and define an overall European framework. The OECD elaborated the Guidelines for multinational enterprises, that constitute a series of principles and standards for responsible business conduct addressed by the governments of the countries in which the companies operate, to provide reccommendations appliable in the global context. (OECD)

The Ten Principles of UN Global Compact were defined by the United Nations to encourage firms to act respecting and defending these principles concerning the environment, human rights, labor standards and anti-corruption activities.


Figure 25. Ten Principles UN Global Compact

The International Labour Organization also stablished four principles regarding the fundamental rights at work: freedom of association, abolition of child labour, elimination of forced compulsary labour and any kind of discrimination in respect of employment and occupation. (ILO)

The International Chamber of Commerce elaborated the ICC business charter for Sustainable Development providing guidelines to integrate sustainability into business objectives and management systems as well as principles to act against bribery and corruption.

The initiatives promoted by the international institutions constitute guidelines and voluntary principles aiming to help executives to develop a strong governance culture and enable firms to address governance-related sustainability issues such as discrimination and harassment, corruption, bribery and fraud, human rights violation, power abuse, privacy breach and others unethical practices. (Eduardo Ortas, 2017)

As highlighted in the previous chapter, a high level of independency and diversification in the board of directors affects positively the companies' financial performance. (Jun Xie, 2018)

Some of the best practices adopted by the most successful and sustainable reputated firms regarding the governing board are ensuring power distribution among the members in order to avoid power abuse and dictatorial practices within the company as well as enabling executives compensation for the achievement of sustainable goals. (Nicolescu, 2021)

As for the development of culture, promoting diversion and inclusion in the workforce and encouraging employees to volunteer in non-profit activities organized by the company are good examples of practices that helps to develop a robust corporate culture and leads to a continuous evolution and growth of the companies. (Eduardo Ortas, 2017)

Last but not least, guaranteeing fair disclosure of information and data, is crucial to ensure a reliable firm's reputation and gain social trust. This point will be further discuss in the following chapter regarding the evaluation of ESG corporate performance. (Koç, 2019)

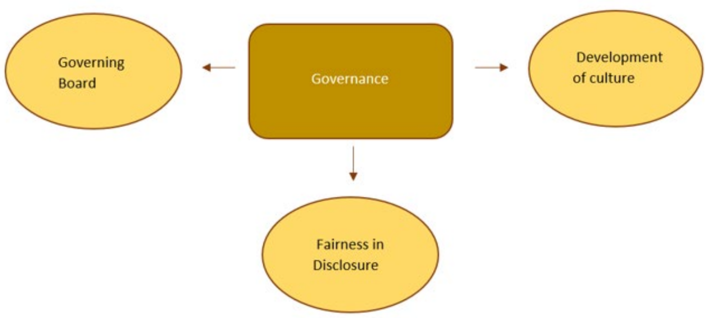


Figure 26 . Functional areas of " Governance"

### *3.4.7- Sustainability Management Tools*

Sustainable management tools help executives to implement sustainable practices and successfully integrate sustainability into the business models. Executives require suitable tools to develop their firm strategies, monitor and control the companies operations and analyse and report the outcomes from the activities performed. Sustainability Management tools aim to provide guidance for managers and support in the decision-making process regarding the integration of ESG practices in corporate performance. (Joaquin Sanchez-Planelles, 2020)

These tools can be certified constituting systematic methodologies or non-certified. Moreover, some firms opt for developing their own sustainable management tools in order to better meet their organizational and operational needs. (Cláudia Silva, 2020).

The figure below presents an overview of the main sustainable management tools used by the most successful sustainable organizations:

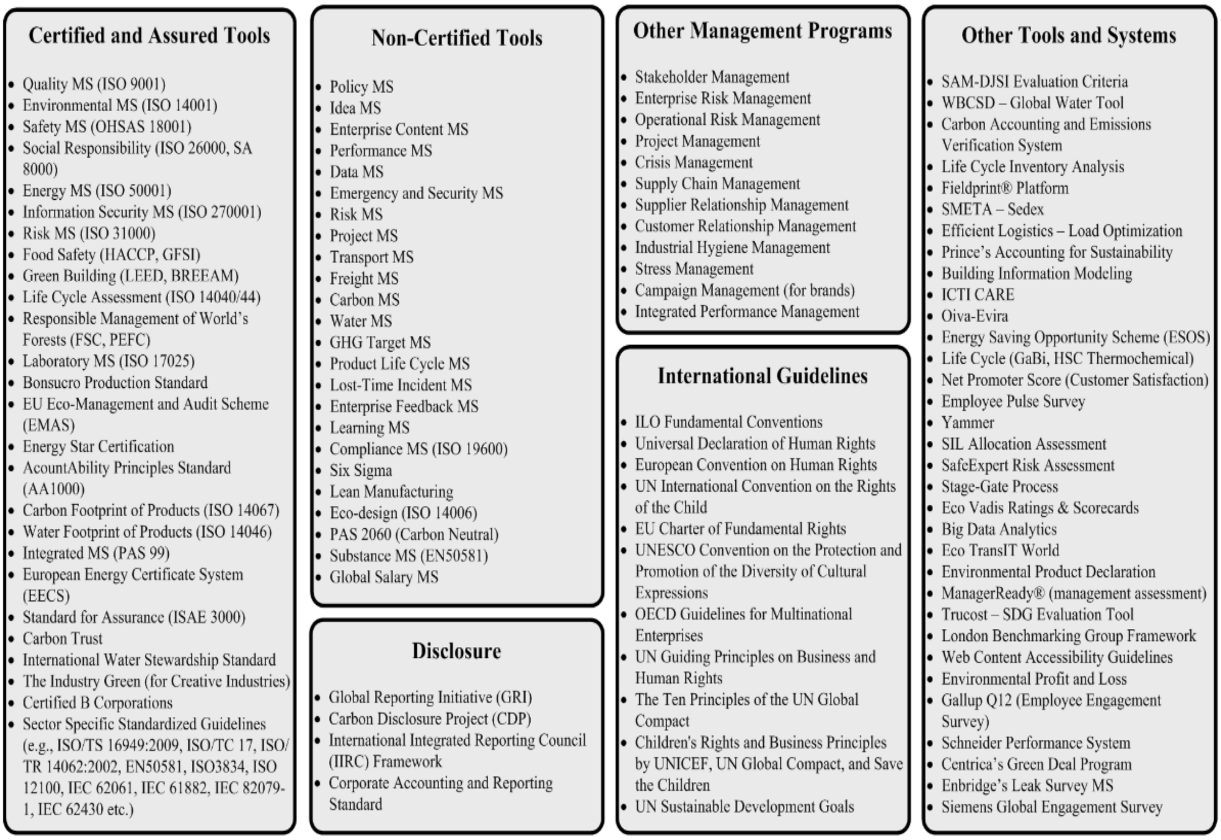


Figure 27. Overview of the sustainable management tools used by the most successful sustainable organizations

**Source:** *"Exploring Organizational Sustainability: Themes, Functional Areas, and Best Practices"*

### *3.4.8-Employees Relations:*

Ensuring a positive atmosphere at the workplace enables employees to fulfill their potential, boost their motivation and encourage them to give their best every day. It is vital to raise awareness about the importance of the role played by employees in the companies and to develop a culture which puts at the heart of the organization the wellfare of their employees, as they are the ones responsible of running daily operations and their performance reflects directly in the company success.

Companies investing resources and efforts to provide training and development for their employees aiming to continuously expanding their knowledge and enhancing their practical skills as well as prioritising employees engagement and satisfaction ultimately outperform the others firms through value generation and the consolidation of sustainable growth in the long-term. (Tay, 2022)

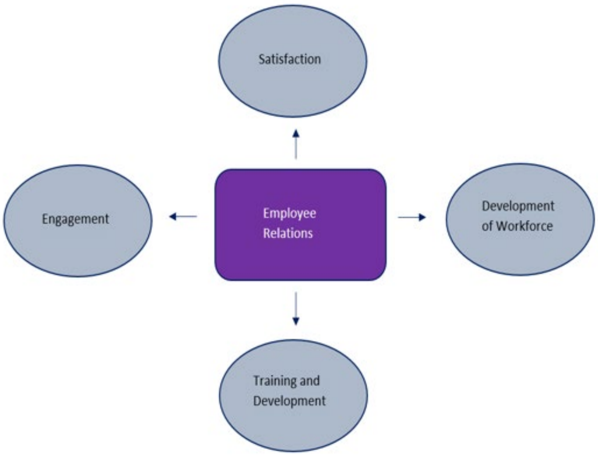


Figure 28. Functional areas of "Employee relations"

Promoting an inspiring and relaxed environment fostering employees creativity and collaboration wtih the aim of ensuring employees engagement at work is a common trait among the most successful sustainable businesses according to Waqas Nawaz and Muammer Koç (Koç, 2019).

More and more companies are remodelling the workplace providing interactive areas and organizing weekly social events to deepen the employees relationships and streghtening the bond with the firm. On the other hand, developing training programs is key to encourage employees to enroll in a continuous learning process pursuing a constant evolution. (Boffo, 2020)

As shown in Waqas Nawaz and Muammer Koç research, it is becoming increasingly popular among the most successful and sustainable companies to develop training programs in which employees with more years of expertise are in charge of mentoring new hired employees with the aim of not only serving as a model and reference to follow their steps, but also to be regarded as a supportive and helping tool to provide them with the knowledge required to perform their tasks properly and ensure their total integration in the company.

Providing job security, ensuring that employees are not stressed and overworked, offering competitive remuneration and recognizing and rewarding their good performance are considered the best practices to maintain high levels of employee satisfaction inside the companies.

### *3.4.9- Health, Wellness, Safety and Security*

This last research theme comprises all measures taken by companies to prevent and minimize the impacts of any kind of accidents that may occur. Disregarding and ignoring these functional areas pose a significant risk for ensuring organizational sustainability as it can have tremendous consequencies, impoverishing the image and leaving a permanent mark on the firms reputation.

The figure below illustrates the main functional areas regarding the organizational sustainable theme of health, wellness, safety and security:

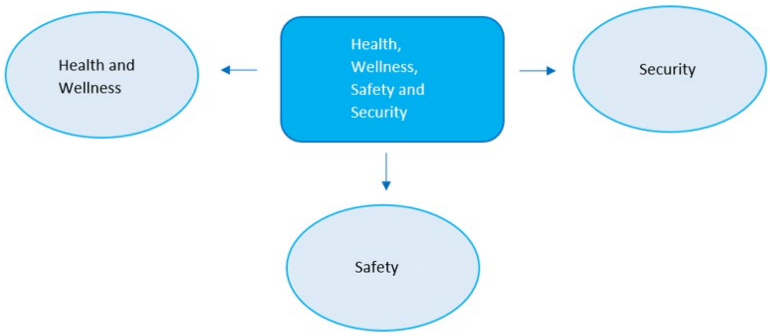


Figure 29. Functional areas of " Health, Wellness, Safety and Security "

Regarding the are of health and wellness, it is not only important to promote good health among the employee of the company but also legally required in the vast majority of territories, with initiatives such as periodically medical checks or developing fitness programs fot the employees to enroll in. These measures will increase employees satisfaction and will help to decrease the tax of absentism due to illnesses in the company as well as raising awareness about the importance of keeping a healthy lifestyle as well as improve the firm's reputation and meet the regulatory requirements. It is similarly relevant to provide employees with the flexibility they need in order to improve the work-life balance of employees. (Aviroop Biswas, 2021)

The area of safety refers mainly to the safety measures put into practice in order to prevent occupational accdents in the workplace and reducing the impacts to a minimum of any kinds of accidents. Monitoring, detection, alerting and emergency systems should be implemented and full-time functioning to eliminate any possibility of accidents and if not possible to prevent, minimizing the impacts of them avoiding all kind of hurting or damage and specially the worst consequences such as the loss of lives. Ibid.

Besides this, other types of external attacks or accidents need to be prevented and taken into consideration such as the breach of privacy data or the steal of intellectual property owned by the companies. The protection of data and information of employees and customers constitutes a moral obligation for any firm that ought to legally meet the requirements and implement measures dictated by the European General Data Protection Regulation (GDPR).

The GDPR is the toughest privacy and security law elaborated by the EU in 2016, it serves as a regulatory tool to enable the protection of individual data, ensure the free movement of data in the EU, and balancing data protection against other fundamental rights and against public and legitimate interest. Every company is responsible of the compliance with this law to provide security and privacy for their employees and customers. (Commission, 2020)

In a nutshell, this chapter has provided a practical framework for the integration and implementation of ESG practices in companies operations, identifying nine themes of organizational sustainability and its main functional areas for improvement.

Resource optimization and minimization of waste and emissions comprises the functional areas of energy and water consumption, products development and packaging and waste management.

The second theme of business and operational excellence alludes to the restructuration of business profile, enterprise risk management, stakeholder engagement, customer satisfaction, stewardship, business diversity and digital operational connectivity.

The third theme being corporate citizenship and social development refers to community and human development as well as to the environmental protection.

The fourth theme of research and innovation encompasses technical and non-technical solutions and the cooperation for innnovation.

The fifth theme of procurement, supply chain and logistics embraces suppliers' sustainability, logistics, sourcing, and domestic purchases.

The functional areas of the governance theme are governing board, development of culture and fairness in disclosure.

The seventh organizational theme of sustainable management tools includes certified and non-certified tools and systems, management programs, international guidelines and disclosure.

The theme of employee relations comprises development and training for employees, employees' engagement and satisfaction as well as development of the workplace.

Last organizational theme embraces the functional areas of health, safety and security.

As a conclusion of this extense chapter regarding the integration and implementention of ESG practices in companies core operations, a summary of the main organizational sustainable themes and their corresponding functional areas, identified by the analysis of the most successful sustainable organizations performance, is provided below:

| 1.-Resource optimization and minimization of waste and emissions |
|---|
| • Energy<br>• Water<br>• Products<br>• Packaging<br>• Waste |

| 2.- Business and Operational Excellence |
|---|
| • Restructuring Business Profile<br>• Enterprise Risk Management<br>• Stakeholder Engagement<br>• Customer Satisfaction<br>• Business Diversity<br>• Stewardship<br>• Digital Operational Connectivity |

| 3.- Corporate Citizenship and Social Development |
|---|
| • Community Development<br>• Environmental Protection<br>• Human Development |

| 4.- Research and Innovation |
|---|
| • Technical Solutions<br>• Non-technical Solutions<br>• Cooperation for Innovation |

| 5.- Procurement, Supply Chain and Logistics |
|---|
| • Sourcing<br>• Supplier's Sustainability<br>• Logistics<br>• Domestic Purchases |

| 6.- Governance |
|---|
| • Governing Board<br>• Development of Culture<br>• Fairness in disclosure |

| 7.- Sustainable Management Tools |
|---|
| • Certified and Assured Tools<br>• Non- certified Tools<br>• Management Programs<br>• Tools and Systems<br>• International Guidelines<br>• Disclosure |

| 8.- Employee Relations |
|---|
| • Development and Training<br>• Engagement<br>• Satisfaction<br>• Development of Workplace |

| 9.- Health, Wellness, Safety and Security |
|---|
| • Health and Wellness<br>• Safety<br>• Security |

Table 5 . Main organizational sustainable themes and their corresponding functional areas

## 3.5 Evaluation of ESG Performance

In light of the growing implementation of ESG practices in companies operations, it has become essential to develop tools in order to measure the fullfillment of firms' sustainable goals and evaluate their corporate sustainable performance. The shift towards a practical approach regarding ESG integration enabling the identification of the main functional areas for improvement and analysis of the best practices to successfully integrate and implement ESG practices in companies' core operation needs to be supported by a continuous assessment of corporate sustainable performance.

The present chapter aims to provide an overview of the evaluation and assesment of ESG practices implementation in companies performance as a measure of their contribution to sustainable development . Pursuing this goal, current defined public and private sustainable indexes, ratings and rankings will be discussed in detail as well as the relevance of stablishing ESG priorities and promoting transparency and fairness in ESG disclosure as the keys will be highlighted to ensure the success of ESG practices implementation and corporate sustainability in the long-term.

Not only companies have to develop a strategy to implement ESG practices in their corporate operations but also need to measure and monitor accurately the level of achievement and compliance with the goals stablished in order to support managers in the decision-making process regarding sustainability as well as to produce periodic reports facilitating data and meeting stakeholders expectations. A considerable amount of effort has been made by public institutions and governamental authorities as well as by private companies to answer this need in the recent years resulting in the proliferation of tools aimed at quantifying the ESG performance of companies. (Márquez, 2005)

The considerable amount of effort being made by governamental authorities, public institutions and private companies aiming to answer the need to quantify and measure the ESG corporate performance has been reflected by the increasing number of ESG rating agencies and sustainable index managers producing tools for evaluating the implementation of ESG practices and the impacts regarding sustainability. The proliferation of these tools are proportional to the rising social and environmentals concerns in society. (Borja Diez-Cañamero T. B.-O., 2020)

Both institutional and private investors are abandoning the traditional approach based on exclusively considering financial criteria such as risk, profitability and liquidity to elaborate their investment portfolio, taking also into account the environmental and social impacts generated by the companies operations. Ibid.

Corporate Sustainability Systems (CSS) were born to serve as tools for analysing, evaluating and measuring quantitatively and qualitatively corporate sustainability in response to the growing demand of investors, shareholders, governments and companies to include ESG extra-financial variables going beyond the merely consideration of the corporate finance performance in the investment portfolio.

CSS can be classified into three different typologies: Indexes, Ratings and Rankings all three serving the ultimate purpose of becoming ESG indicators for any stakeholder. Before going in depth with each typology of CSS it is vital to provide a conceptual framework making reference to the "Stakeholders Theory" as every tool aimed at measuring ESG performance should comply with this theory taking a multi-stakeholder approach.

The theoretical basis of a multi-stakeholder approach is grounged in Stakeholder Theory. This theory constitutes a shift in the paradigm regarding financial profitability not as the ultimate goal of companies but as a means for shared value generation.

The Stakeholders Theory states that incorporating stakeholders demands and expectations in the decision-making process of the companies as well as being able to align stakeholders interests in the same direction, reinforces the relationship between the management and the stakeholders creating a shared value and ensuring a maximum long-term benefit for companies taking into consideration the three dimensions of sustainability and favoring all stakeholders. On the other hand, Shareholders Theory focuses on financial profitabilitity in the short-term, this new approach stresses the need for a company to create value for all the stakeholders not just the financial investors (shareholders). (Freeman, 1986)


Figure 30 : Types of stakeholders

In order to embrace this multi-stakeholder approach proposedby Stakeholders' Theory in the evaluation of corporate sustainability it is crucial to introduce the concept of Stakeholder management.

Stakeholder management can be defined as the process aimed at organising, controlling and enhancing companies relationship with their stakeholders. It comprises the systematic identification of stakeholders, the analysis of their needs and expectations as well as the planning and implementation of actions pursuing stakeholders engagement.


Figure 31 : Stakeholders' Management

Two opposed approaches are present in the Stakeholders' Theory: the management of stakeholders and the management for stakeholders. The first approach considers stakeholders as vehicles for achieving corporate objectives regarding them as merely providers of resources for companies (Schipper, 2019), whereas the second one values stakeholders not only for their resources but also for their ideas and potential contribution to accomplish the goals of the company embracing and integrating them in the corporate strategy and mision (Huemann, 2013). In the "Management of stakeholders" approach, stakeholders are motivated and engaged by the production of companies' specific outcomes whilst the "management for stakeholders" approach conceives granting special attention and making stakeholders feel valued as the key to ensure stakeholders' engagement (Julian, 2008).

The first approach is based on resource dependency and the instrumentalization of stakeholders, receiving criticism for developing stakeholders relationships in a manipulative and transactional way (Schipper, 2019). Whilst it is true that the second approach of management for stakeholders has gained more and more popularity over the recent years, practioners acknowledge the complexity of achieving win-win feasible solutions in a practical framework (Eskerod, 2015).

Ultimately, academia is placing the focus on the combination of both approaches aiming to ensure a higher level of flexibility and efficiency regarding project stakeholder management and considering the merge of both approaches, management of stakeholders and management for stakeholders, the best approach to pursue stakeholders' engagement (Huemann E. a., 2016).

The growing concerns for environmental and social issues have boosted the emergence of several initiatives aimed at reducing and mitigating the negative impacts resulted from corporate performance as well as creating value for society, such as social accounting, sustainable reporting, social and environmental standards definition, indexes, ratings and rankings production integrating ESG performance indicators. (Borja Diez-Cañamero T. B.-O., 2020).

Some of the major index and ratings providers worth mentioning are: Bloomberg, Sustainalytics, Thomson Reuters, MSCI (Morgan Stanley Capital International), DJSI (Dow Jones Sustainability Index), CDP (Carbon Disclosure Project), RobecoSAM Corporate Sustainability Assessment and FTSE Russell. Regarding the rankings, the Sustainability Yearbook and the World's Most Sustainable Corporations Global 100 Ranking, already cited in the previous chapters. (OECD)

CSS vary depending on the methodologies, metrics, data and weightings used by the providers. There is an ulterior need for the development of standarized metrics and unified taxonomy in order to face the challenge posed by the heterogenity in the existing corporate sustainability systems (CSS) regarding the evaluation of ESG corporate performance. (Escrig-Olmedo, Muñoz-Torres, & Fernández-Izquierdo, 2010)

The analysis of the different methodologies adopted to measure ESG performance is vital to understand which are the main ESG factors driving final ratings.

The definition and selection of the criteria taken into consideration in each dimension of sustainability (Environmental, Social and Governance) for the development of the CSS is crucial to monitor and score corporate sustainable performance and the compliance with sustainable goals. Indexes, ratings and rankings differ from one to another due to the fact that different criteria have been selected and included by each provider to develop the metrics for assessment of corporate performance attending to different principles and approaches. (Jankalová & Jankal, 2017).

Nevertheless, analysing the major index providers and famous rating agencies it can be claimed that generally speaking the criteria used to evaluate the environment dimension includes natural resource use, level of carbon emissions, pollution and waste energy efficiency as well as the creation of environmental opportunities for improvement. The social dimension focuses on the evaluation of the respect of human rights, integration and diversity, workforce conditions and supply chain. Lastly the governance dimension comprises metrics regarding board independency and diversity, sharholder rights, management compensation and corporate ethics. Ibid.

The table presented below illustrates the most relevant criteria for the evaluation of each sustainable dimension: (OECD)

| Environmental factors | Social factors | Governance factors |
|---|---|---|
| Natural resource use | Workforce | Board independence |
| Carbon emissions | Human rights | Board diversity |
| Energy efficiency | Diversity | Shareholder rights |
| Pollution/waste | Supply chain | Management compensation |
| Environmental opportunities | | Corporate ethics |

Table 6: ESG criteria

Source: OECD, ESG investing: practices, progress and challenges

The criteria presented previously in general terms is orientative thus every provider ranks specific aspects of sustainability according to different principles. We are going to proceed to place the focus on the most famous and used ratings stablishing a comparison among them and highlighting the main differences and the different approaches when assessing corporate performance.

Bloomberg is a data company that offers proprietary ESG data and provides a metric selection placing the focus on measuring the impacts of the environmental and social dimensions of sustainability. For the E and S dimensions industries are divided into broad categories: higher, medium, lower environmental and social impacts whereas in the governance dimension there is no distinction regarding the type of industry or the sector in which companies operate, stablishing the same metrics for each industry. Investors can examine both the scoring methodology and the company reported data underlying each score. In addition to ESG scores, Bloomberg provides a number of sustainable finance solutions, offering data-driven insights to help investors integrate ESG throughout the full investment process and give support in the decision-making. MSCI and Sustainalytics services aim to provide guidance for investors enabling them to identify and understand financially material ESG risks and opportunities, in order to integrate these factors into their portfolio construction and management process. (Boffo, 2020)

Thomson Reuters differentiates between ten categories in their ESG metrics to conform the environmental,social and governance scores resulting from more than 400 ESG metrics with a subset of 186 fields selected. Ibid.

In the table below is presented a comparison between the ESG criteria used by the major index providers to develop the metrics and score corporate sustainable performance in order to guide investors to integrate sustainability in the construct of their investment portfolio:

| Pillar | Thomson Reuters | MSCI | Bloomberg |
|---|---|---|---|
| Environmental | Resource Use | Climate Change | Carbon Emissions |
| | Emissions | Natural resources | Climate change effects |
| | Innovation | Pollution & waste | Pollution |
| | | Environmental opportunities | Waste disposal |
| | | | Renewable energy |
| | | | Resource depletion |
| Social | Workforce | Human capital | Supply chain |
| | Human Rights | Product liability | Discrimination |
| | Community | Stakeholder opposition | Political contributions |
| | Product Responsibility | Social opportunities | Diversity |
| | | | Human rights |
| | | | Community relations |
| Governance | Management | Corporate governance | Cumulative voting |
| | Shareholders | Corporate behaviour | Executive compensation |
| | CSR strategy | | Shareholders' rights |
| | | | Takeover defence |
| | | | Staggered boards |
| | | | Independent directors |
| Key metrics and submetrics | 186 | 34 | >120 |

Table 7: ESG criteria comparison between major index providers

Source: OECD, ESG investing: practices , progress and challenges

A broader insight into the different typologies of ESG performance assessments is proposed below, with the aim of highlighting the most relevant and used CSS to measure corporate sustainable performance nowadays as well as the advantages and disadvantages of the different tools. In general, however, it should be noted that Corporate Sustainability Systems are characterized for being global and multi-sectorial. Ibid.

***<u>Indexes</u>***

ESG Indexes serve as a tool for evaluating and assessing ESG opportunities and risks by the definition of selected companies for the analysis and the ESG scoring according to the criteria defined.

ESG indexes are designed for investors looking to track equity markets while applying a sustainability best-in-class selection process . ESG indexes are characterized by measuring and evaluating corporate sustainability from a financial point of view focusing mainly on investors and shareholders as they are managed by stock exchange operators (Márquez, 2005) . Dow Jones Sustainability states " *ESG indices are broad-based and market-cap-weighted designed to evaluate corporate performance by meeting sustainability defined critera while maintaining similar overall industry group weights as their underlying benchmark".*

The most important and recognized indexes are calculated daily or in real time due to their stock market nature. Each index provider uses their own system to define the way of assessing corporate sustainability. The weight is the measure used by Indexes to show the results which is then confirmed by the final ESG score by economic, stock market or financial factors.

***Ratings***

ESG ratings evaluates and measures companies' exposure to long-term environmental, social and governance risks and corporate sustainable performance involving financial implications in order to provide investors with a broader insight of the companies potential and support the financial analysis. ESG ratings allows investors to understand the management of, and companies' exposure ESG issues in multiple dimensions, serving the purpose of integrating ESG data into securities and portfolio analysis, implementing ESG aware-investment strategies and assisting in managing exposure to ESG aspects. (FTSE Rusell)

ESG Ratings evaluate corporate sustainable performance trough the development of a score taking into consideration the selected criteria. Unlike the indexes, they are updated annually and embrace a more multi-stakeholder approach.

***Rankings***

Rankings are a type of Corporate Sustainable Systems which evaluates corporate sustainability performance by providing an annual final list including the selected companies for the analysis sorted out by the quality of their corporate performance in terms of sustainability. The criteria used for developing the ordered list differs from the methodology employed to evaluate corporate performance.

As ESG ratings, ESG rankings are also updated annually. It should be noted that although ratings and rankings hold a more multi-stakeholder approach compared to indexes they are also financial biased.

It is important to highlight the different approach taken by the index providers mentioned previously focusing on the financial repercussion and feasibility of the integration of ESG practices in the corporate performance and assessing the impacts on the corporate financial performance with the aim of both providing solutions for companies and guidance for investors in contrast with the approach taken by non-profit organizations, whose principal aim is to keep track of the compliance with sustainable goals, providing data and measuring the progress in order to ensure the preservation of the planet and fair corporate performance regarding tthe social and governance factors of sustainability, reducing the negative impacts resulting from their operations. (Jankalová & Jankal, 2017)

An example that illustrates the non-financial approach is CDP, Carbon Disclosure Project. CDP is an international not-for-profit organization that runs the gobal disclosure system for investors, companies and governments in order to measure and act on their environmental impacts. CDP gathers and provides corporate climate change data and makes it available to the marketplace pursuing the objective of building a sustainable economy and improving corporate management of greenhouse gas emissions. CDP issues an annual list where large companies are ranked by their greeenhouse gas emissions. CDP not only aims at providing transparency to interested parts about corporate greenhouse gas emissions and the risks associated regarding climate change but also seeks for helping organizations in the collection, analysis and reporting of greenhouse gas emissions resulting from corporate activities offering guidance for companies regarding the disclosure of information.

Although some of the major index providers discussed above are north american finance companies it is crucial to stress that the European market has been the major driver of corporate sustainable systems. (Borja Diez-Cañamero T. B.-O., 2020).

### 3.*5.1- Non-financial reporting in the European Union. Regulations*

In this subchapter the benefits that firms can reap from ESG disclosure will be discussed as well as an overview of the european vigent legislation regarding non-financial reporting will be presented.

Firstly, it is vital to clarify that non-financial reporting is synonymous of ESG reporting and it alludes to the disclosure of companies' environmental, social and governance information.

In the present time, large European companies have reached a level of growth and expansion so that they have a significant impact and their corporate performance potentially affects several areas regarding the economy, environment, social, human rights, and health of the community in which they operate. (Sajnóg, 2022)

Consequently, Corporations have become more prone to disclosing non-financial information in response to the increasing pressure of governamental organizations, social media and the need to satisfy their stakeholders. Nowadays, ESG disclosure is considered an essential tool for ensuring firms' social legitimacy about the impacts of their operations as well as for enhancing corporate reputation. For companies themselves non-financial reporting helps to improve risk management and foster environmental, social, financial performance and competitiveness in a long-term basis. (Jun Xie, 2018)

As for investors and stakeholders, ESG reporting is crucial for determining the stability and predictability of corporate financial performance on financial markets. Lastly, disclosure of non-financial information serves for citizens and communities to reinforce their relationship and trust with the firms and enables them to ensure that corporate activities do not compromise the respect of their rights and the quality of their lifestyle. Ibid.

Generally speaking, the compellence of companies for disclosing not only favorable information but also unfavorable lays in the consideration of the abscence of information by outside investors as negative information and the consequent reduction of the firms'value due to the feeling of unreliability brought by undisclosed information. (Lokuwaduge & Heenetigala, 2017)

Jun Xie, Wataru Nozawa and others examined the relation between corporate efficiency and ESG disclosure by means of a nonparametric regression analysis in their research of 2018. They developed and confirmed several hypothesis concluding that a non-linear relation is present between corporate efficiency and the overall ESG disclosure, existing a positive effect at a certain disclosure level. Moreover, they stated : " Among the three components of ESG disclosure, governance disclosure has the strongest effect on corporate efficiency" This fact, can be consequence of a greater global interest shown by investors and stakeholders in governance information, commonly regarded as directly related to companies operations.

In a nutshell, having analyzed the results provided by different research in the existing literature it can be claimed that corporation periodically publishing ESG reports achieve higher market valuation and stock market returns than the ones providing stand-alone reporting and that transparent and consistent ESG disclosure enhances corporate performance as well as increases firms'value. (Weber, 2014).

It is important to emphasize that non-financial corporate reporting is not only beneficial but also mandatory. The requirement of non-financial reporting within the EU was imposed by the Directive 2014/95/ EU also known as Non-financial Reporting Directive (NFRD). The NFRD defined the rules to disclose ESG information according to a specific criteria that applied to selected companies. The European Union Directive or NFRD ( 2014/95/EU) demands companies to provide non-financial statements in their annual reports from 2018 onwards including information about environmental protection, social responsibility and treatment of employees , anticorruption and bribery, respect for human rights and working conditions, independence and diversity of the boards and other sustainable-related information. (Comission)

This directive amends the previous accounting directive 2013/34/EU in which firms were only required to comply with the principles of corporate governance. The current EU non-financial reporting regulations stablished by the NFRD apply to large public- interest companies with more than 500 employees. This group includes public companies, banks, insurance companies andother companies designated by national authorities as public interest entities. Ibid.

The Directive 2014/95/EU requires companies to provide periodically non-financial information from two different perspectives refered to as double-materiality. On the one hand, the outside-in perspective alludes to the way enterprises performance and development is affected by sustainability issues (environmental, social and governance) and in the ohter hand, the inside-out perspective refers to the corporate performance effect on the communities in which they operate. (Sajnóg, 2022).

In order to help companies comply with the regulations contained in the Directive 2014/95/EU and ensure the disclosure of relevant ESG information in a more consistent, unified and reliable way, the European Comission developed the Guidelines on non-financial reporting in june of 2017. These guidelines had a non-binding character, they served the purpose to provide guidance for companies on non-financial reporting. Companies were not obliged to adopt them but were highly encouraged to follow them in order to successfully disclose ESG information.

In june of 2019, after the ratification of the Paris Agreement and the creation of the Action Plan on financing Sustainable Development by the EU, the European Comission published the Guidelines on reporting climate-related information as a suplement to the Guidelines of 2017 which included the recommendations of the Task Force on Climate Related Financial Disclosures (TCFD), created in 2015 to provide information for investors about companies measures to mitigate the risks and effects of their corporate performance as well as about the transparency in their governance. In addition, the EU published in december of 2019 a regulation, creating the norms and standards for the disclosure of sustainable development related information in the financial services sector, requiring financial market participants and advisers to disclose information regarding the risks posed by their activities to sustainable development. (Comission)

Despite the effort being made on creating the standards and providing guidance for companies to report ESG information, the Directive 2014/95/EU lacked appliability as it only requires large companies ( constituting a relatively small group of enterprises) to comply with the legislation. Furthermore, the NFRD did not ensure the quality and reliability of the non-financial information disclosed as the specifications on this matter were not sufficient. (Sajnóg, 2022)

With the aim of covering the limitations of the current non-financial reporting regulations, the European Comission committed to review the NFRD Directive in 2020 and launched a public consultation of the review. Finally, in April of 2021 a package of measures were adopted by the European Comission, including a proposal of the Corporate Sustainability Reporting Directive (CSRD) .This new Directive requires also SME to periodically report on non-financial information expanding the scope of the NFRD to all listed companies on regulated markets not only the ones with more than 500 employees. (Comission)

Different requirements on ESG disclosure are stablished for large companies and those from the SME sector due to the costs from obtaining the information and the adequacy regarding the size of the firms. The CSRD also introduces mandatory EU standards for reporting ESG information and sheds light into the double materiality perspective, previously mentioned, requiring companies to report information about how sustainability matters affect their performance as well as reporting about the impacts of their corporate performance on the communities in which they operate. The first reports complying with the requirements of CSRD are expected to be emited by 2024. Ibid.

Although the EU has come a long way pushing the acceleration of the creation of a legal framework, insting all kind of companies regardless of their size and industry in which they operate to commit to periodically report non-financial information , there is still work to be done to make companies aware of the need to embrace this regulations for the common sake and regard them as the key to ensure fair monitoring and control of the progress being made to achieve sustainable goals and promote corporate sustainability performance, beyond any other coporate particular interests. (Sajnóg, 2022)

This chapter has served the purpose of providing a conceptual framework to introduce the multi-stakeholder approach adopted nowadays regarding the evaluation of ESG performance. Next, the different typologies of Corporate Sustainable Systems (CSS) are presented as well as the heterogenous criteria used to measure, assess and monitor corporate sustainable performance by the major index providers and ESG rating agencies. Afterwards, the benefits of ESG reporting for companies are presented and discussed. Lastly an overview of the European non-financial reporting regulations of the recent years is presented with the aim of raising awareness not only about the need to integrate and implement ESG practices in corporate performance but also about relevance of monitoring periodically through ESG disclosure and non-financial reporting in order to quantify the progress in the achievement of sustainable objectives and the compliance with the legislation in force.

## 3.6 Conclusions

The third chapter regarding the integration of ESG practices in corporate performance constitutes the fundamental one of the present literary review analysis since it comprises the relevance and impacts of ESG practices integration and implementation on firms performance, the conceptualization of the existing sustainable business models, the different dimensions of ESG practices implementation in companies core operations from a practical approach, and last but not least, the evaluation of corporate sustainable performance.

As remarkable conclusions obtained from this extensive chapter is worth highlighting in first place, that the vast majority of studies carrieed out and developed in the existing literature provide evidence and findings about ESG practices integration benefits and positives impacts on corporate financial performance in a long-term basis, stressing that among the ESG factors, governance constitutes the one which has a major effect. Secondly, there is a wide range of research in the existing literature providing a conceptual framework for the integration of sustainability in corporate performance as well as providing a broad categorization of the different sustainable business models. Nevertheless, there are few studies treating the ESG integration in companies performance as a process and companies feel the need for concrete guidance on the implementation of ESG practices in their operations.

Lastly, the evaluation and periodic assessment of ESG corporate performance is crucial for obtaining information about the fullfillment of sustainable objectives in companies activities as well for ensuring the compliance with the vigent legislation regarding sustainability stablished by the main regulatory bodies and institutions. Non-financial reporting and transparent and fair ESG disclosure are crucial as they help to identitfy and understand the main challenges that companies and organizations face nowadays in relation to the integration of sustainability in their corporate performance and serve as a tool to provide solutions to overcome these setbacks and constraints identified as well as to enable continuous improvement.

## 5. Discussion

The aim of this chapter is to expose and discuss the critical views generated from the literature review analysis.

Nowadays, with immediate global threats arising such as climate change, the rising levels of emissions and pollution or the depletion of natural resources, society is more aware of the urgent need to take action in order to mitigate the effects of human activity on the planet.

SRI has been flourishing and potentially growing during the recent years, investors not only seek for profitable returns but also look for the opportunity to align their personal values with their investments portfolio. Similarly, an increasing number of firms include ESG factors in their overall risk analysis. Companies have shown larger commitment to adopt ESG practices not only to reduce their environmental footprint and mitigate their negative impact but also have become proactive in generating value for society and enhancing the quality of life of the communities in which they operate through the inclusion of sustainability in their business models and strategies to accomplish sustainable goals in a long-term perspective, besides pursuing the mere economical interests of ensuring profitability and financial stability.

Integrating sustainability in corporate performance and successfully implement ESG practices in the companies' core operations poses, without the shadow of a doubt, the major challenge posed for the global economy.

The present literary review has placed the focus on the European framework for sustainable development. The initiatives launched by the European Union over the past recent years such as the 2015 Paris Climate Change agreement, the development of the Agenda for 2030 sustainable development, the creation of action plans aiming to integrate and promote sustainability or the stablishment of regulations regarding non-financial disclosure and asessment of ESG corporate performance, constitute significant progress and have paved the path for sustainability integration although this goal is still far from being fully achieved. The lack of common definitions, ESG disclosure, globally accepted taxonomies and development of standarized metrics are the main obstacles that prevent SRI and CSR from continuing growing and need to be overcome in the forthcoming future.

This literature review analysis concludes that integrating ESG practices in the corporate performance not only is beneficial for the preservation of the planet and creating value for society but is also beneficial for the companies themselves. The analysis of numerous empirical studies and academic research present in the existing literature, illustrate by providing empirical evidence and foundated arguments, the positive impact of ESG practices integration on corporate financial performance. Furthermore, the vast majority of the studies reviewed, confirm that among the ESG factors, the governance category has the most significant effect on the companies' profitability, specially in larger firms. Only a minority of the literature and academic research analyzed concluded showing no relationship, negative or mixed relationship between corporate sustainability and corporate financial performance. Nevertheless, the variability in the findings cannot be considered relevant and representative due to the fact that the fluctuation of the indicators aimed at providing the empirical evidence is mainly driven by external and specific factors and hence considered invalid for extrapolation and for making a generalized statement regarding the relationship between corporate sustainability and financial performance.

The diversity present in the methodologies used to assess corporate financial performance as well as the differences in the size and particular characteristics of the firms, industry, economical and political context in which the companies operate, constitute the main contributors to the variation of the results presented.

In light of this claim, further research is needed to examine the moderating role of particular variables such as companies' size, industry or economy in different contexts in order to provide a universal understanding of the relationship between corporate sustainability and financial performance with the aim of reducing the variation in the findings and extending the applicability of the research to all kind of enterprises as well as identifying and distinguishing potential groups for further anlysis.

SMEs account for the majority of businesses worldwide representing around 90 % and constitute important contributors to job creation and global economic development, providing 50 % of employment worldwide. Consequently, it is crucial to not only take into consideration large firms for the analysis of the best practices to adopt by companies aiming to integrate sustainability in their corporate performance, but also look for the extention of the findings and the universal appliability of the practices regardless the size of the company and other firms' characteristics and external factors.

There is also an ulterior need to conduct academic research in regard of the feasibility and the impacts of implementing ESG practices in companies framed in an emerging and developing economic context as a gap in literature examining the impact of the integration of sustainable practices on corporate financial performance has been also identified in countries with developing economies . Further research is needed for countries of developing economies since the number of publications is considerably reduced and continues to stay behind compared to the research conducted in developed countries .

The present literary review also illustrates how ESG practices integration in corporate operations and performance can create potential value based on the research of Withold Henisz, Tim Koller and Robin Nutall in 2019, which differentiates between five ways of value creation regardless of the particular characteristics of the firms such as the size, industry or geographical area in which they operate: facilitating top-line growth, reducing costs, optimizing resources and capital expenditures, minimizing regulatory and legal interventions and boosting employee productivity.

The compellence for companies to pursue corporate sustainable performance and to integrate and implement ESG practices in their core operations, lays in the consolidation of companies' long-term success and continuous growth, ensuring profitability and financial stability in a long-term basis , providing the potential for value creation, enabling differentiation and outperformance of the competition as well enhancing firms' reputation by the generation of environmental and social benefits.

The adoption of environmentally-friendly practices stimulate companies to innovate technologically and operationally pursuing the optimization of resources and the maximum efficiency in their operations, which inevitably leads to cost reduction and improvement of corporate finance performance.

The integration of social practices enables customers' engament, not only attracting new cutomers but also retaining the old ones, deepening customers relationship with the brand and creating value. Social practices also consider providing quality working conditions, the respect of workforce rights and pursues employees identification and reaffirmation with the firms' corporate values and vision, making them feel as an essential piece of the corporate mission and encouraging their constant evolution and fullfillment of their potential.

Lastly, a strong corporate governance reflects positively and has the most significant repercussion on the corporate finances by ensuring meeting all stakeholders needs and requirements, reducing the material risk for investors and attracting new ones, developing robust business strategies, defining firms' vision and goals, enabling the shift from traditional business models to sustainable ones, gaining perdurable legitimacy and strenghtening customers' trust and loyalty to the firm.

Over the past recent years academia has placed the focus on providing the conceptual framework for the integration of sustainability in business strategy and corporate performance, by the definition and categorization of the different sustainable models and development of sustainable methodologies and tools aimed at facilitating the transition from traditional business models to sustainable ones and supporting firms' executives in the decision-making process regarding sustainable issues. However, from the literature review analysis a shift on the approach took place by 2018 following the timeliness of the publications in the existing literature where few studies emerged with the aim of examining the ESG integration in corporate performance from a practical perspective analysing and identifying the best practices to successfully integrate sustainability in the business strategy and adopt and implement ESG practices in the companies' core operations.

The analysis of the existing literature has enabled the identification of two main perspectives regarding ESG integration, revealing that it can be treated from the socially responsible investment (SRI) on the one hand and from the sustainable development perspective on the other hand. Moreover, it can be claimed that the vast majority of the literature focuses on the conceptualization and the definition of a theoretical framework for corporate sustainable performance, treating ESG integration in the business models as and outcome by considering the feasibility and weightening the impacts generated on the corporate financial performance, rather than analysing the integration process itself from a practical approach, in order to provide guidance regarding the implementation of sustainable practices in companies' operations, supporting executives in the decision-making process and facilitating the transition from the traditional business models to the sustainable business models.

Our work aims to create a synergy between theory and practice , contributing not only to by deepening in the conceptual understanding of the theoretical models but also identifying the practical limitations that nowadays companies face when integrating and implementing sustainable practices in their corporate performance with the aim of encouraging firms to review and reshape their business strategy in order to operate within the sustainable development framework.

In terms of the definition of the theoretical framework for ESG integration, the present literary review provides an overview of the most relevant sustainable methodologies and tools used to enable the integration of sustainability into the business models as well as a detailed categorization of the different sustainable business models attending to several principles.

On the one hand a first classification according to the type of sustainable innovation developed distinguishes between three types of archetypes: technological, social and organizational. On the other hand, according to the stream of revenues of the company and costumers' interactions with the products and services provided, another classification is proposed differentiating among four categories of sustainable business: sustainable production, sustainable consumption, servitization and circular economy. Furthermore, a definition of the characteristics of the different sustainable business models is provided analysing the strengths and weaknesses of each one as well as the possibility of interaction and practical combination of them.

As for the construct of the practical framework for the ESG practices integration in companies' core operations, we opted to use as a model and follow the structure of the resarch carried out by Nawas and Koç in 2019. This research was one of the first in the existing literature to adopt a practical approach in regard to ESG integration.

By the examination of the corporate sustainable performance of the most successful sustainable organizations a content framework for organizational sustainability was proposed, identifying nine main themes for organizational sustainability with its corresponding functional areas (38 in total). It constituted a shift of perspective and represented the emergent trend in the literature focused on the practical application and implementation of sustainable practices. We based our work in the findings of this research in order to provide guidance for enterprises willing to adopt ESG practices and illustrate the best practices for the integration and implementation of sustainability in corporate performance. By taking this approach in the literary review we aimed at supporting and fostering the potential application of the existing conceptual models as well as identifying and recognising the practical limitations that companies nowadays struggle to overcome in the process of ESG integration.

With the aim of illustrating the content framework proposed for the organizational sustainability management a summary of the main nine themes identified with their corresponding functional areas for improvement is provided (Koç, 2019):

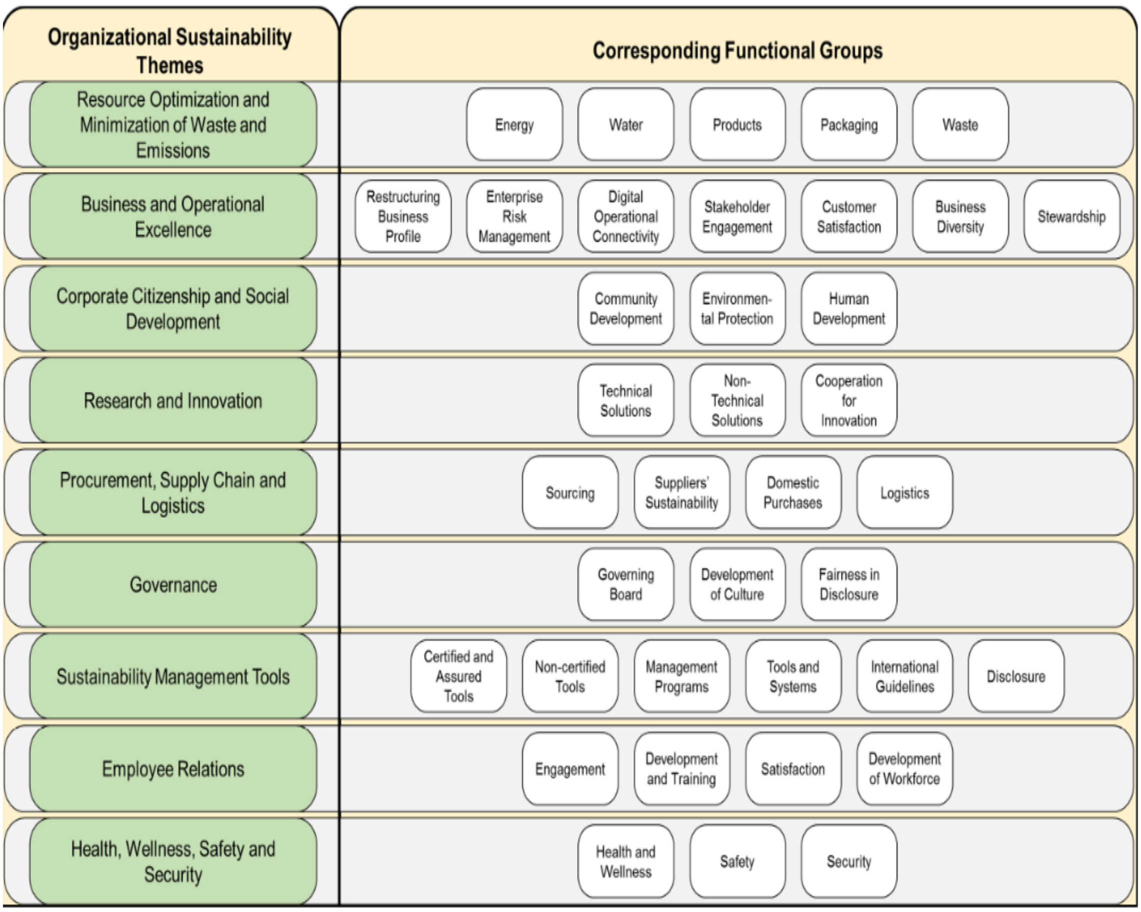


Figure 31: Content framework for organizational sustainability

The first theme referring to the resource optimization and minimization of waste and emissions comprises the functional areas of energy and water consumption, products development and packaging and waste management. The second theme of business and operational excellence alludes to the restructuration of business profile, enterprise risk management, stakeholder engagement, customer satisfaction, stewardship, business diversity and digital operational connectivity. The third theme being corporate citizenship and social development refers to community and human development as well as to the environmental protection. The fourth theme of research and innovation encompasses technical and non-technical solutions and the cooperation for innnovation. The fifth theme of procurement, supply chain and logistics embraces suppliers' sustainability, logistics, sourcing, and domestic purchases.The functional areas of the governance theme are governing board, development of culture and fairness in disclosure. The seventh organizational theme of sustainable management tools includes certified and non-certified tools and systems, management programs, international guidelines and disclosure.The theme of employee relations comprises development and training for employees, employees' engagement and satisfaction as well as development of the workplace. Last organizational theme embraces the functional areas of health, safety and security.

The shift from the theoretical to the practical approach in the existing literature regarding the ESG integration and implementation in corporate operations is coincident with the increasing global efforts to develop corporate sustainable systems. The practical approach aiming to analyse the best practices to integrate successfully sustainability in corporate performance and to identify the main functional areas for the implementation of sustainable practices in the companies core operations, needs to be accompanied and supported by the development of tools and definitions of global taxonomies to efficiently measure and evaluate corporate sustainable performance.

Not only companies have to develop a strategy to implement ESG practices in their corporate operations but also need to measure accurately corporate sustainable performance to help and support executives in the decision-making process regarding sustainability and to monitor the level of achievement and compliance with the goals stablished in order to produce periodic reports facilitating data and meeting stakeholders expectations. A considerable amount of effort has been made by public institutions and governamental authorities as well as by private companies to answer this need in the recent years, resulting in the proliferation of tools aimed at quantifying the ESG performance of companies.

Corporate Sustainability Systems (CSS) were born to serve as tools for analysing, evaluating and measuring quantitatively and qualitatively corporate sustainability in response to the growing demand of investors, shareholders, governments and companies to include ESG extra-financial variables going beyond the merely consideration of the corporate finance performance in the investment portfolio as well as for their consideration in the overall risk analysis.

CSS can be classified into three different typologies: Indexes, Ratings and Rankings all three serving the ultimate purpose of becoming ESG indicators for any stakeholder, taking a multi-stakeholder approach in order to take into consideration their demands and expectations.

Some of the major index and ratings providers worth mentioning are: Bloomberg, Sustainalytics, Thomson Reuters, MSCI (Morgan Stanley Capital International), DJSI (Dow Jones Sustainability Index), CDP (Carbon Disclosure Project), RobecoSAM Corporate Sustainability Assessment and FTSE Russell. Regarding the rankings, the Sustainability Yearbook and the World's Most Sustainable Corporations Global 100 Ranking are some relevant examples.

The principal challenge posed for the evaluation of corporate sustainable performance to overcome in the forthcoming future is the heterogenity presented by the different Corporate Sustainability Systems (CSS). CSS vary depending on the methodologies, metrics, data and weightings used by the providers. They also differ from the approach taken, private firms tend to provide the assessment placing the focus on a financial perspective and evaluating the feasibility to integrate sustainability in corporate performance, whereas international institutions or non-profit organizations take a non-financial approach placing at the heart of their interest the preservation of the planet and value creation for society when evaluating corporate sustainability performance.

In light of these claims, it can be concluded that there is an ulterior need for the development of standarized metrics and global taxonomy seeking for a universal methodology of measuring and monitoring the fullfillment of sustainable objectives within the enterprises.

To conclude with the discussion of the present literary review is vital to highlight the important role played by ESG disclosure. Companies producing ESG dislosure achieve higher markets' valuation and stock market returns. Periodically non-financial reporting contributes to ensure social legitimacy, enhance firms' reputation and value as well as to improve corporate performance, by providing data and enabling the understanding of the main limitations companies face in the practical application and implementation of ESG practices in their corporate operations and promoting a continuous improvement for corporate sustainable performance.

Nowadays governamental authorities and international organizations have placed the focus on developing robust legislation for extending the obligation for ESG disclosure to all kind of enterprises regardless their size, industry or economical context in which they operate with the aim of monitoring progress and promoting continuous improvement for sustainability integration in corporate performance as well as providing information periodically for investors and any kind of stakeholders.

## 6. General Conclusions

In light of the discussion presented above, the present literature review analysis reaches critical conclusions, and proposes new lines for future research to fill in the knowledge gaps spotted and identified through the review of the existing literature acknowledging as well the limitations and constraints encountered in the development of the literature review analysis.

In regard of the limitations, it is vital to stress that the conclusions and critical views have been reached and generated from the analysis of a wide range of empirical studies and research available in the existing literature. The methodology selected and considered most suitable to perform the literature review analysis is a mixed literary review, combining both conceptual and systematic search, which made it possible to become more knowledgeable in the topic while ensuring the achievement of unbiased and reproducible results. Although the conclusions obtained and critical views are unique they are based on previous academic research and empirical studies carried out and framed in a specific context.

The present work contributes and adds value to the existing literature regarding ESG practices integration and implementation in corporate performance by the originality of the viewpoints presented and the suggestion of new directions for future research. Nevertheless, we have not developed and provided our own empirical study to justify and present the findings in which our arguments are foundated. Consequently, the interpretations and conclusions extracted are limited to the scope of the data examined in the literature reviewed.

Another recognized limitation of our work, is that the vast majority of the literature reviewed and used as a reference to extract the new conclusions had focused mostly on the analysis of large firms' corporate sustainable performance creating the need to conduct studies aimed at validating and examining the feasibility to extrapolate the findings to other kind of companies.

In light of a proposition for future research we suggest academia to examine the impacts of ESG practices' integration and implementation from a practical approach in order to cover the knowledge gap identified in the existing literature, pursuing the creation of a synergy between theory and practice and supporting managers in the adoption of sustainable business models and development of sustainable long-term strategies.

Companies are aware of the urge to shift from traditional business models to sustainable ones for the common sake but often struggle in the process of integrating sustainability in their daily operations and need more practical guidance. Despite the detailed and broad definition of the conceptual framework for sustainability integration in companies' operations, more research and empirical studies needs to be conducted in order to illustrate the best practices to adopt in order to ensure a successful corporate sustainable performance.

We suggest academia two different lines for future research, both embracing the practical approach regarding the ESG practices integration and implementation in corporate performance.

In first place, it is vital to highlight the importance to direct future academic research towards the development of universal guidelines for ESG integration in corporations and to synthesize the best practices globally appliable regardless the size, sector of the industry, geographical location, economical and political context in which the different companies are framed to enable all kind to sucessfully adopt and integrate sustainability in their corporate performance, as well as extending and broadening the scope and applicability of the research going beyond the analysis firms' corporate sustainable performance.

On the other hand, it is remarkably important to examine the role of the different moderating variables already mentioned, size, economy and industry type of the firms in order to reduce the variation in the findings as well as to identify potential groups of enterprises and classify them with the aim of producing specific and customized practical guidelines to implement ESG practices in their performance taking into account the particularity of their corporate performance and the context in which they operate.

The encouragement for academia to place the focus on the practical approach for ESG integration process both at a universal and particular level will serve the purpose of assisting all firms to tackle their practical limitations regarding ESG integration and enabling and promoting a global adoption of sustainability in business strategies and business models. Lastly, we invite academia to widen the theoretical framework for corporate sustainability exploring new directions of sustainable oriented innovation to develop and improve sustainable business models as well as analysing the effects of adopting the existing sustainable business models on corporate financial performance and the possibility to combine them in practice.

In regard of the practitioners field, it is essential that companies produce periodically non-financial reports and provide ESG disclosure seeking for the validation of the theoretical framework proposed to foster the potential application of the conceptual sustainable business models as well as to understand the practical limitations that organizations need to overcome to integrate sustainability. The commitment and participation of companies to provide transparent and reliable data is vital to assess the impacts and compare their corporate performance before and after ESG integration and plays an important role to enable the transition from the traditional business models to sustainable ones, promoting continuous improvement in their corporate sustainable performance.

As for governments and policymakers, their efforts should be directed in the forthcoming future into the creation of a global famework to support the process of ESG practices integration in companies operations by the elaboration of robust regulations and the development of universal taxonomies and standarized metrics to provide a common interpretation regarding the evaluation of corporate sustainable performance, as well as ensuring corporate compliance with the legislation in force in terms of transparency and fairness in non-financial disclosure. Last but not least, we encourage governments and institutions to keep raising awareness and providing eductation for society and enterprises about the importance to adopt sustainability promoting and rewarding sustainable practices in all aspects of our daily lives as the key to mitigate the human activity, preserve the planet, generate value and enhance our quality of life without compromising the one for future generations.

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