

# **Effects of an Environmentally Sustainable Business Strategy on Attitudes and Behavior of Employees**

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Master of Business Administration

in Sustainability and Governance

Submitted to Dr. Ivo Ponocny

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## **AFFIDAVIT**

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## ABSTRACT

The process of turning green is a long and conscious path and for many businesses significantly challenging. Yet, it is not only a pressure of the public, rather a necessity to adapt to the changes before it would be too late. A green work environment can have a positive influence on its stakeholders, which can not only lead to consciousness at the workplace, but it could help to create a pro-environmental mindset in the everyday life of these individuals. Consequently, in this paper a quantitative study was conducted through a survey, which measured to what extent a sustainable business strategy can influence the attitudes and change the behavior of its employees.

According to the findings of the study, there is a moderately favorable association between the two variables. This shows that corporations may have an effect on employees' behavior by effectively exhibiting environmentally sustainable behavior toward stakeholders. It was analyzed how employee attitudes conduct had evolved over the course of their employment with the relevant firm. However, the conclusion that the influence is rather negligible can be drawn because of the modest, but positive correlation. Employee satisfaction and corporate behavior have been proven to be positively correlated, suggesting that employees of sustainable firms tend to be happier. The outcomes of the qualitative research were a helpful addition to underline the significance of this study. The statements from the interviews supported the earlier findings that leaders' mentality has a significant impact on employees that lasts over time.

As one of the main limitations of the study, the fact that fewer people than anticipated took part in the poll can be seen as a restriction on the sample size. However, it is seen to be adequate to produce realistic results, although a bigger sample group makes it easier to assess if a given result represents a genuine discovery and, in some cases, lowers the risk of developing errors. Furthermore, as the subject of sustainability is a sensitive one in terms of self-reflection, surveys like the one conducted for this particular work may have a higher likelihood of research bias because some responses may be affected by giving more socially desirable replies. Additionally, there were certain questions in this research that might have made participants feel uneasy. It is advised to conduct additional research focusing solely on the organization's role in generating long-lasting changes in employee attitudes. Future research may also focus on the subjects' private behaviors in order to better comprehend the ramifications of these findings. Due to the additional advantages of this conduct, organizations should think about developing or enhancing their sustainable strategy, by developing a plan that aims to have a long-lasting impact. In this approach, the sustainable behavior of the employees benefits both their personal environment and the company.

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## **LIST OF ABBREVIATIONS**

ASCE – American Society of Civil Engineers

CEO – Chief Executive Officer

CSR – Corporate Social Responsibility

EFA – Exploratory Factor Analysis

EGB – Green Employee Behavior

FAO – Food and Agriculture Organization

HR – Human Resources

HSO – Highly Sustainable Organization

ISO – International Organization for Standardization

IUCN – International Union for Conservation of Nature and Natural Resource

LEED – Leadership in Energy and Environmental Design

MSO – Moderately Sustainable Organization

NHO – Non-Sustainable Organization

OCBE – Organizational Citizenship Behavior

OGC – Organizational Green Culture

PEB – Planned Environmental Behavior

PSP – Personal Sustainability Plan

SDG – Sustainable Development Goals

SDS – Sustainable Development Strategy

TPB – Theory of Planned Behavior

UN – United Nations

UNEP – United Nations Environment Programme

UNESCO – United Nations Educational, Scientific and Cultural Organization

WCED – World Commission on Environment and Development

WHO – World Health Organization

WWF – World Wildlife Fund

# 1 INTRODUCTION

In today's world, the term "sustainability" has gained significant importance. Yet, sometimes it is still not used in the right form. What is the meaning of sustainability? Why is it so important? Sustainability can have a different meaning to many individuals; therefore, it is very important to understand the core idea behind this concept in order to apply it properly. To me personally, sustainability means: finding our connection to nature and people, by creating a life with conscious habits, leaving positive footsteps behind and thinking in the long term, without causing harm to our environment. This paper will dig deeper in the topic of sustainability, by analyzing it from various dimensions, with the objective of getting a better understanding, what is missing to deliver- or how to deliver the correct message to organizations and individuals to make them understand the urge for change and consequently to create a business environment, which has only positive effects on its stakeholders.

In the past decades, business environments have experienced major changes due to industrial development and rising environmental issues– both of which require an adjustment to the needs of the organization, the needs of employees, and vice versa. The above-mentioned factors are just a fraction of all the change agents of the past years. Employee wellbeing became a top priority as per a social aspect of sustainability, which caused significant changes in the structure and daily operation of work environments. Corporate social responsibility and human resources play a significant role in the execution of business strategies. The most efficient methods for educating sustainability have been investigated, yet in this rapidly changing and vibrant environment it is hard to find adequate channels to equally enlighten different individuals. The link between sustainability and business behavior is an interesting field, since most major organizations have incorporated green strategies due to environmental issues and consequently policies, in order to curb the rising problems. Therefore, the aim of this thesis is to investigate how a sustainable work environment affects the behavior of stakeholders. This paper will analyze the above-mentioned link and its consequences for employee's attitudes. In case final findings are going to demonstrate a positive influence, it could be considered that organizations are an optimal tool to embrace and transmit pro-environmental attitudes to its stakeholders. If so, this thesis will serve as proof that an adequately applied green business strategy can be a game changer for our society.

## 1.1 Context and previous research

Most organizations have faced pressure to make sustainable changes in the past decade due to the rising environmental issues. Today, one of the most worrying problems of our lifetime is global warming caused by fossil fuels. For May 2023, global temperatures rose by 1.15 Celsius related to pre-industrial levels (Robinson, 2023). Scientists have been warning politicians through providing unquestionable evidence; therefore, many actions were taken, but still not enough. This data serves as only one of the many drivers that embrace companies to implement a sustainable strategy. This will be detailed in literature review's Paragraph 2.2.2, discussing the importance of sustainability.

Change is a slow process and it is coming. So said climate activist Greta Thunberg in 2019 in a conference of the United Nations, "Right here, right now is where we draw the line. The world is waking up. And change is coming whether you like it or not." This change has come for several organizations, but it is waiting for others to arrive. A sustainable strategy has been incorporated in most large organizations' daily operations, by clear and measurable long-term goals. To succeed, it is inevitable to have a supportive background from an economical perspective, such as a determined top management who is able to proceed (Epstein et. al, 2010). Unfortunately, as previous research has also shown, the failure of implementing such transitions was, mainly in small- and mid-size businesses, where the corporate structure of a company is not so defined as in large organizations, as well as the lack of economic resources (Takacs et. al, 2022).

The main motivation behind the elaboration of this paper was partially a personal experience. Having the experience that a firm wants to introduce a sustainable strategy, but already in the planning phase it starts to face various barriers. One of these challenges was the financial limitations, which would have required tremendous investments from the owner in order to succeed. Only those sustainable changes were applied which were an immediate cost saving solution to the firm, by exclusively looking at the benefits in the short term. Small- and medium enterprises are the least prepared for such investment, especially if they are solely privately owned, since owners have all the financial responsibility over their companies. For such businesses, this results in difficulty to create long term plans, due to the uncertain economic environment of which some countries are facing. Yet, main obstacles of success were not only the financial limitations, but the organizational culture and the mentality of management (Epstein et al., 2010). The importance of the management in the process of implementing a sustainable strategy, will be discussed further in the literature review.

A study conducted by Eccles et al. (2011) regarding the impact of a corporate culture of sustainability on corporate behavior and performance has shown that high sustainability organizations – companies operating with a pro-environmental strategy for years – are in general more productive and management is deeply involved and aware of the sustainable metrics of the firm. Additionally, these companies tend to create plans for the long term and share more information regarding their non-financial data. As existing research has shown, those organizations practicing a green citizenship behavior are more successful overall and are more likely to gain consumers with a pro-environmental mentality based on a study by Priyankara et al. in 2018. Conclusively, those enterprises with a shared vision with a deep commitment towards sustainability, ensure their employees feel that their contribution to the green strategy is crucial (Oswald et al. 1994, cited by Chang, 2020) and it embraces them to follow the same mentality. Transparency is a key factor when the strategy of an organization has a high commitment to sustainability. It is the company's interest that employees are devoted to the same values and are transmitting the same to the external stakeholders of the firm (Chang et al., 2019). In general, it should be a key aspect for any organization to deepen the relationship of employees with corporate values and vision. Therefore, it is essential to find the right instruments to reach the employees, so the organization and its environment can benefit from it.

## **1.2 Research aims and problem formulation**

The aim of this research is to investigate whether an organization with a green strategy is able to influence the attitudes of its employees in a positive way, embracing them to create sustainable habits in their everyday lives. Existing knowledge has supported the findings that organizations with high Organizational Citizenship Behavior for the Environment (OCBE) are in general more successful (Priyankara et al., 2018) and those employees working in such companies are happier. Yet, there is a lack of proof that those individuals working in such companies are practicing sustainable behavior outside of their work environment. This paper is hoping to prove that organizations with a green strategy have a positive effect on their employees, because of the work environment they are surrounded by every day, referring to colleagues, company policies or top management mentality. Since they are required to follow the sustainable policies of their work environment, this paper investigates whether the efforts of a sustainable business behavior reach beyond the behavior of the individuals in the workplace and motivate them to follow the same mentality in their personal lives. Several studies have shown that an individual spends an average of 90,000 hours at work over a lifetime (Henley, 2018). Therefore, it is crucial that work environments have a positive effect on employees, since the time spent there has an

important role in the professional, but more importantly personal development of that individual. If companies are able to create such a positive impact on employees, that they would carry these habits outside of work and pass it on to their families and friends, our society would be able to contribute at a greater pace in the fight against climate change and other sustainability issues. Also, next generations would receive a sustainable education in their homes, which would define our whole future. Consequently, the main problem that this paper investigates is defined as the following:

*Is an environmentally sustainable work environment able to influence employees in a positive way?*

This is considered the main research question of this paper. As one of the limitations of this research, the effect on stakeholders such as suppliers or clients were not analyzed; this is one of the areas to conduct future research. Yet, a clear correlation can be noticed; such companies with high sustainable interest have a tendency to work with pro-environmental suppliers and usually are able to attract customers with similar values (Chang, 2020). This could be referred to as the circle of sustainability.

The survey in connection with this paper was planned in a way to measure the level of sustainability of the participant itself, the employers and the social environmental influence of the participants. As a result, an additional research question was included to support the investigation of the main problem of this research, which is the following:

*Do enterprises with sustainable strategies attract employees with a pro-environmental mindset?*

Research question number two addresses the problem from a different perspective, whether individuals with pro-environmental attitudes are seeking employment in a sustainable environment. Answering this question will provide a better understanding: whether employees of an organization are motivated to work there because they share the same sustainable values as their employer or whether it is an irrelevant factor for those job seekers with pro-environmental beliefs. This factor will be analyzed in more detail in Chapter 4, where the results of the conducted research will be discussed. Results are going to support the main research question, by excluding those professionals with a highly sustainable mindset with no influence from the current workplace from the main sampling process.

### **1.3 Background information**

As the main research for this paper, a questionnaire has been conducted investigating the above detailed research questions. Additionally, 6 micro interviews have been made with professionals from different industries, whose opinion contributes to the main objective of this paper. Each research is investigating the main objective of this paper, which is the link between sustainability and business behavior and its consequences for employee's attitude.

#### **1.3.1 Background information of survey participants**

Participants for this questionnaire have a diverse background. Initially, the main objective was to investigate the opinion of individuals working in similar companies, but as a consequence of the snowball sampling method, participants were included from several continents, industries and ages. There are three companies where the most employees have participated, however, organizations will remain anonymous in this paper due to some participants' confidentiality to their employer, but the majority shared the name of the enterprise they are working in. To provide an insight in the background of the participants' employer organizations, further exploratory analyses were conducted related to company size and geographic locations. Also, companies were categorized in three groups, based on the level of sustainability within the company. These elements will be further detailed in Paragraph 3.4.1. Furthermore, the questionnaire investigated the gender of the participant and experience level of the organization of the participants. Results are divided between large and mid – small sized organizations, which serves as a convincing proof for examining the correlation between sustainability in companies with many and few employees, which have been investigated throughout this whole paper. The questionnaire was filled out by 80 individuals. The initial target sample size was expected to be 100 individuals; however, an 80% response rate was considered to be sufficient in order to reach the main research goals.

#### **1.3.2 Background information of interviewees**

During the process of the preliminary research, a conclusion was drawn regarding the many definitions of sustainability. After several discussions with friends and professionals in various industries about sustainability, it became clear that many of them were not quite familiar with the word "sustainability." On the other hand, others provided great explanations about what this concept means for them. This provided space for further investigation. As the main area of research of this paper is the correlation between human attitudes and a pro-environmental

workplace, it has been decided to dig deeper into the background of some of these individuals. It became clear that those individuals having a clear opinion are either working in a sustainable organization or they are living a life with pro-environmental habits. Meanwhile those not having a clear idea about sustainability are not practicing any conscious habits in their workplace or private lives. The answers of those professionals which were believed as an important input for this research, will be introduced in this paper and analyzed. This section will provide readers with an understanding regarding the meaning of sustainability from the angles of individuals in a top management or a highly influential position.

#### **1.4 Structure of the thesis**

The paper is structured, by introducing in Chapter 1 the context and the motivation behind writing this paper, through analyzing the placed research questions, which investigate the objective of this work and emphasize its importance. The brief background of the survey and the interviewees will be introduced as well, which serve as a basis for the primary research of this thesis. Chapter 2 serves as a summary of the available theory, starting with the basics of sustainability to provide an overview about the major environmental, social and economic challenges, which are the root cause of the increasing importance of a pro- environmental behavior. These arguments help to emphasize the importance of this study, by providing an understanding on the consequences of not following a pro environmental mindset. Furthermore, this chapter identifies the psychological factors of the changing human behavior and investigates its connection between a sustainable work environment. In Chapter 3 the methodology of the chosen research will be detailed, along with the design of this study, by introducing the structure behind qualitative and quantitative methods and the analytical tools used for this paper. Chapter 4 will provide space for the analysis of the results together with the discussion of the findings. This chapter serves as the core pillar of this paper, since the results will determine the final outcome of the research which will be discussed and evaluated in the same section. Finally, in Chapter 6 conclusions are drawn, also limitations are discussed and recommendations for further research.

## **2 LITERATURE REVIEW**

### **2.1 Introduction**

After understanding the research aims and objectives of this study detailed in Paragraph 1.2, this chapter of the paper will discuss the findings of the existing literature. It will provide an understanding about the most important concepts, key ideas and definitions, which served as a basis for this thesis. First, the reader will gain a basic knowledge about sustainability, by defining the concept. In order to raise awareness, the importance of sustainability will be introduced, which also emphasizes the gravity of this research. In Paragraph 2.3, the main pillars of sustainability will be explored, which play an important role in the understanding of the survey. This will be discussed later in detail, in Paragraph 3.4.1. It will also identify the ideas behind a sustainable business strategy and explore the psychological aspects behind the concept. Finally, a sustainable work environment will be analyzed, which supports the objective of this thesis and helps the reader understand what an ideal corporate environment should be, as well as how such an environment affects pro-environmental behavior of employees.

### **2.2 The concept of sustainability**

#### **2.2.1 Definition of sustainability**

The concept of sustainability was defined in several ways in the last two decades. It has become an increasingly important issue during this time and due to its versatility, various understandings of the concept have been developed. This has also led to loss of credibility in the theory, which as a result of the increasing environmental issues in the past years, have started to regain awareness. The first and most common definition of the concept, as sustainable development, was introduced 20 years ago by the Brundtland Commission in 1987, which became the most widely used definition for the term:

“the development which meets the needs of current generations, without compromising the ability of future generations to meet their own needs.” (WCED, 1987)

Despite the main scope of this paper is environmental sustainability, the concept has to be analyzed as a whole to gain a better overview. Although sustainability enjoys a greater attention in the past decades, its origin comes from an understanding of how humanity lived before the Industrial Revolution, and what the real meaning of sustainability is. The United Nations as one

of the main supporting organizations of a “common future” and a bridge between nations, especially protects those that are different from leading societies of today's world. There are still some isolated societies, which are preserved with great attention, where environmental and social sustainability is a natural concept. The UN defined indigenous societies as “inheritors of unique cultures and ways of relating people and the environment”. This relationship between the environment and people transformed radically in the past decades, which became crucial that by rebuilding and understanding it better, would serve as part of the solution for the environmental issues we are facing today. The main goals of sustainable development in the last six years were defined as well by the United Nations in the Agenda 2030 for Sustainable Development. This was adopted by all the UN member states, in order to reach the common goals by 2030 and to create a powerful source to fight together the following issues, which were determined to be the most important:

### **Table 2-1 17 Sustainable Development Goals**

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1. End poverty in all its forms everywhere
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Ensure healthy lives and promote well-being for all at all ages
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower all women and girls
6. Ensure availability and sustainable management of water and sanitation for all
7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10. Reduce inequality within and among countries
11. Make cities and human settlements inclusive, safe, resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
  16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all build effective, accountable and inclusive institution at all levels
  17. Strengthen the means of implementation and revitalize the global partnership for sustainable development”
- 

SOURCE: UN 2030 AGENDA, 2015

The above stated Sustainable Development Goals (SDG) help to understand the diversity of this concept. As the last objective of the statements highlights, the importance of partnerships are the means of fulfilling and reaching these goals. Digging deeper into the challenges and importance of the SDGs of the United Nations, several interviews have been conducted with workers in top managerial positions about investigating the meaning of sustainability. The majority of employers of these individuals follow the UN’s Sustainable Development Goals. This will be examined in Paragraph 4.5.

After discussing the actions of the UN towards sustainability, the diversity of the concept has been clarified, as well as the reason why sustainability has a particular meaning to various individuals. As Johnston claimed in the research comparted with Santillo in (2007, p. 62):

“It seems clear that sustainability can mean a number of things to a variety of constituencies and, while there may be no objection to the sentiments expressed in the respective definitions, they are far from holistic.”

Yet, the essential of each adequate definition is quite similar. In 2009 the European Commission introduced its sustainable development strategy, the EU SDS, where the following definitions were provided:

“Sustainable development stands for the needs of present generations without jeopardizing the ability of future generations to meet their own needs.” - The similarities between the statements of the Brundtland Commission Report are quite eye-catching, therefore a more detailed expression has been provided as well. - “In other words, a better quality of life for everyone, now and for generations to come. It offers a vision of progress that integrates immediate and longer-term objectives, local and global action, and regards social, economic and environmental issues as inseparable and interdependent components of human progress. Sustainable

development will not be brought about by policies only: it must be taken up by society at large as a principle guiding the many choices each citizen makes every day, as well as the big political and economic decisions that have to be taken. This requires profound changes in thinking, in economic and social structures and in consumption and production patterns.”

A rather simplified economic approach of sustainability was defined by the Commissioner of the European Parliament, Karmenu Vella as the following:

“Imagine that you have a capital of 100 € in the bank. That 100 €, which is the capital, is giving you interest. As long as you are taking the interest, and spending the interest without touching the capital, then that is sustainability. As soon as you start taking away the capital as well, then you have entered the unsustainable cycle.”

The commissioner gave this explanation, for the documentary series of Netflix, *Seaspiracy* (2021). This documentary investigated the concept of sustainable fishing, in order to raise awareness and to fight against plastic pollution. This explanation of sustainability provides a simple understanding about the term, which can be true to any industry and aspect of life, as long as our society creates circumstances under which all patterns of life will flourish (Ehrenfeld, 2005). These possibilities include social, economic and environmental possibilities, which are all interconnected and shape the theory of sustainability. Therefore, according to Kates et al. (2005) based on his detailed analysis of the original definition provided in the Brundtland report, the aforementioned three pillars (social, economic, environmental) must be assisted by the preservation of nature, life support systems and community. A deeper insight of the three pillars of sustainability will be provided in Paragraph 2.2.3, as these aspects serve as the basic metrics of the survey.

## **2.2.2 The importance of sustainability**

Costanza and Daly (1987) finds that the apprehensions about the depletion of natural resources was in the main scope of research for economists in the 18th century. In these decades, where the industrial revolution was a slight idea, people lived a life in symbiosis with nature. Therefore, economists such as Vincent de Gournay, one of the first physiocrats in history, claimed nature as the main source of wealth. The term physiocracy aligns with the meaning “Rule of Nature”. The well-known French physician and economist Francois Quesnay also supported the concept of physiocracy. Based on his findings published in the book of the Economic Table in 1758, he argued that the actual engines of the economy are created by excess products of agriculture, which support the economy through wages, rent and purchases. Analyzing these studies, it

became clear that the importance of sustainability was a major concern three centuries before. These findings have also understated the fact that sustainability is highly dependent on the economy. This allows us to understand that economists in the 18th century have already foreseen the consequences of the fast growing and unsustainable behavior of our society. The question rightly arises: what happened in the past 300 years? The dynamic process of industrialization starting in 1760 has radically changed the mindset of the society and shifted the attention towards technological innovations, which created a faster and profit centralized mentality. Unfortunately, in the basic values of this new era sustainability was not able to fit in, therefore it caused great environmental and social damages in the long run.

Coming back to the 21st century, as a consequence of the past decades, our humanity is facing several issues today. The above expressed question has occurred in the research of B. Moldan, S. Janusková and T. Hák (2011), where they argued that basic human needs defined by Maslow (Maslow, 1968), psychological, survival, safety, love and esteem have to be fulfilled, before a human can take care of other needs altruistically. They claimed that this argument can explain the fact, why humans ignored the rising issues which were seen already long before. The economical observation of sustainability regained its importance, which is supported by several existing research. The Dutch economist Roefi Hueting (2001) claims that to establish sustainability, the recovery and restoration of nature is inevitable. Although, the origin of these investigations arose from the existing challenges. To get a basic overview about the major global challenges today, it will be discussed briefly in the following paragraphs. In the strategic plan for conservation of the World Wildlife Fund (WWF) issued in 2008, the general director, James P. Leap has stated:

“We have only this generation to get sustainability right. We all need to work together as never before to get there.”

WWF, as one of those many organizations supporting the SDGs of the United Nation, strategy aligns considerably with the objectives set by the UN, formed to their profile. While WWF is primarily fighting against environmental issues, the United Nations is combating all economic, social and environmental challenges. Based on the respective global framework of WWF, the main environmental threats are considered to be the following:

## 1. Pollution

According to the World Health Organization, approximately seven million people are affected by death worldwide. Indoor and outdoor pollution are both a major threat to the wellbeing of individuals and it has a direct effect on climate change. The following chart visualizes that more than 50% of the population lives in areas, with air quality exceeding the WHO pollution target limits. Approximately 30% of the population in the most polluted areas, are living in China and India.

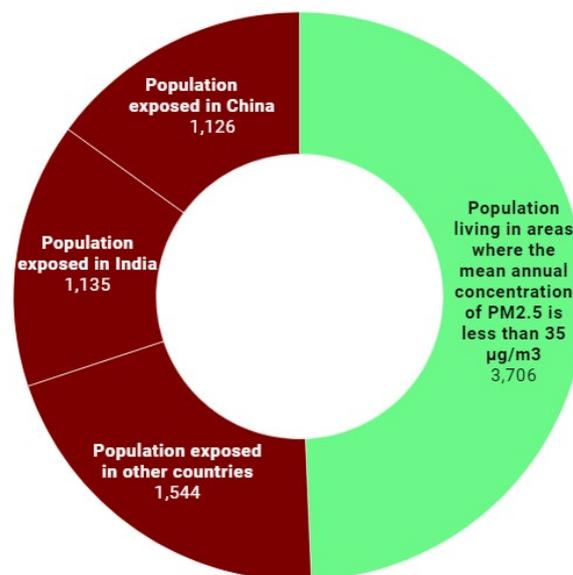


FIGURE 2-1 GLOBAL POLLUTION LEVELS (2017)

SOURCE: THE WORLD BANK, WORLD DEVELOPMENT INDICATORS

When the term pollution appears, most of us associate it with the different types of air pollution. Plastic production has become one of the most significant environmental issues today. According to the research of Hannah Ritchie and Max Roser, by 2015 plastic production rose to 381 million tons, which nearly weighs the same as the entire human population. It has been discovered that the plastic waste generated exceeded the amount of plastics produced in a year. The data gathered, based on the studies of Jambeck (2015), shows the plastic inputs to the oceans were approximately 8 million tons per year. The chart below Geyer (2017) represents the global plastic production in the last 65 years. This clearly shows that we are producing 7 times more than in 1950. Out of this, approximately 150 million metric tons is produced for single use products. This data chart speaks for itself:

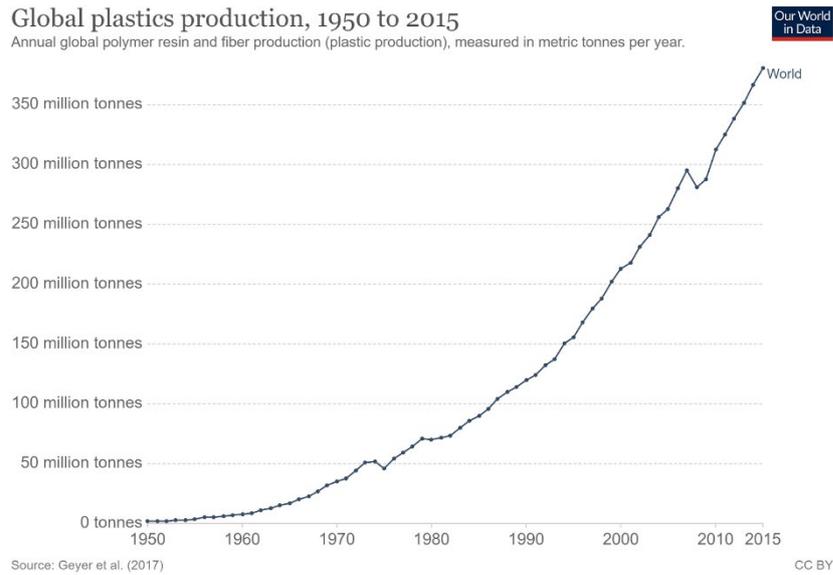


FIGURE 2-2 GLOBAL PLASTIC PRODUCTION IN THE LAST 65 YEARS

Source: Our World in Data, by Hannah Ritchie and Max Rosed (2022)

## 2. Climate Change

Global warming is considered to be one of the most perceptible issues today. In each corner of the world leaves its traces. The chart below indicates the radical increase of temperatures in our waters and land, from 1880 until 2020.

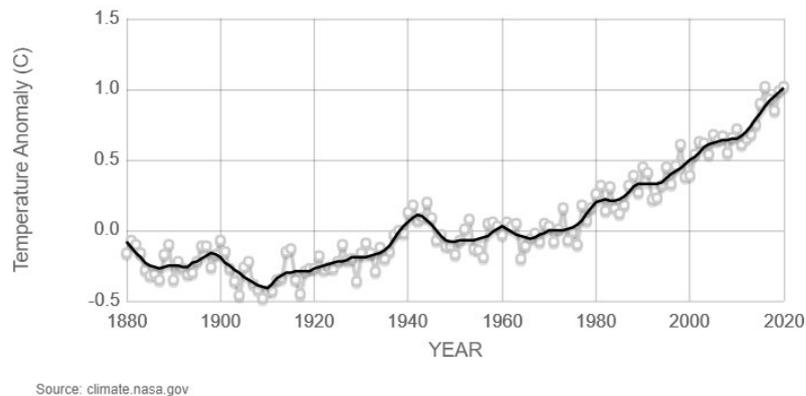


FIGURE 2-3 GLOBAL TEMPERATURE RISE 1880-2020

Source: NASA/GISS

The data collected by NASA/GISS shows that between the analyzed time period, the world has experienced the warmest temperatures in the last 20 years. In the years 2016 and 2020 an average 1.02 °C temperature anomaly was measured.

Global warming has a direct effect on all forms of life on earth. Lesley Hughes argues in his study about biological consequences of global warming that the abnormal temperature rises in the last decades directly affected the physiology, distribution and phenology of some species. It was also stated that the major responsibility for this change can be written at the expense of humans (Hughes 2000, p.60). As a result, unfortunately, rising temperatures are hitting records since then every year.

### 3. Infrastructure

Based on the findings about global infrastructure (McCarthy, 2021) one of the most eye-catching results is the underinvestment in the United States. A report was published by the American Society of Civil Engineers in 2021, where the most important infrastructural challenges were tackled. As the following chart below highlights, although there is conscious planning to find a solution for the issue, the investment gap in infrastructure is constantly growing. As a result, the funding chasm grew in 10 years from \$2.1 trillion to almost \$2.59 trillion (ASCE, 2021). These issues without a solution can result in negative influence on the economy. An estimated \$3 million jobs disappear. Therefore, the research recommends making significant investments focusing mainly on maintenance solutions, as well as drinking, waste and stormwater issues.

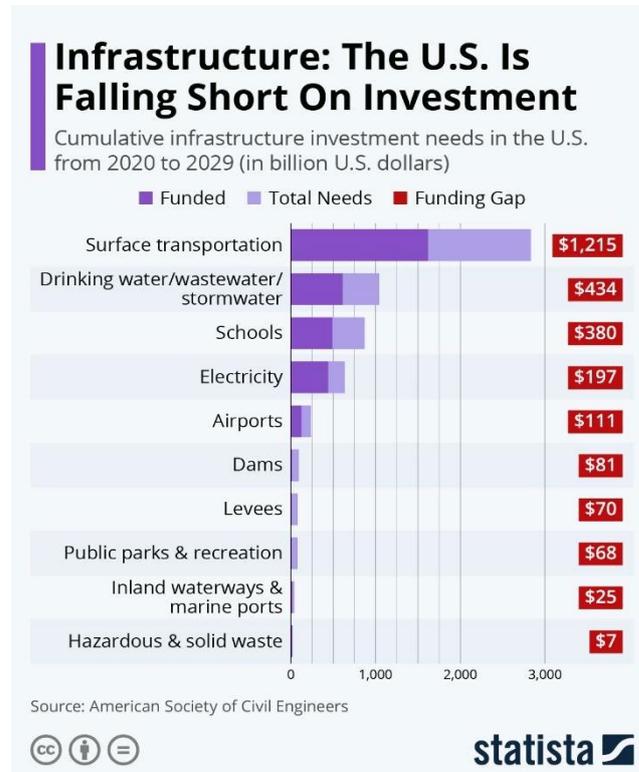


FIGURE 2-4 INVESTMENT GAP IN THE U.S.

Source: ASCE, Niall McCarthy, 2021 Statista

#### 4. Energy production

Climate change is one of the main consequences of energy production and consumption. The chart below examines the global energy consumption of 2019, according to the data collected by Our World Data, using the as primary source the report of BP Statistical Review of World Data (2020). It states that the respective year fossil fuel energy consumption was 84.3%, which consists of oil, coal and gas. Only 15.6% percent of the consumed energy comes from renewable, low-carbon sources. The source of approximately 75% of the greenhouse gas emissions in the world, results from the transformation of fossil fuels to energy. The increasing levels of CO2 emissions have the largest negative impact among the global issues, where countries have to cooperate to fight against it. Therefore, the sustainability programs of organizations such as the UN, WWF or the Paris Agreement (2016), have a significant role in this fight. A disastrous result of this issue is that a great amount of this pollution remains forever in the atmosphere (Hansen et al., 2007). Therefore, the goal is to transform energy production to environmentally safe, fossil fuel free energy sources.

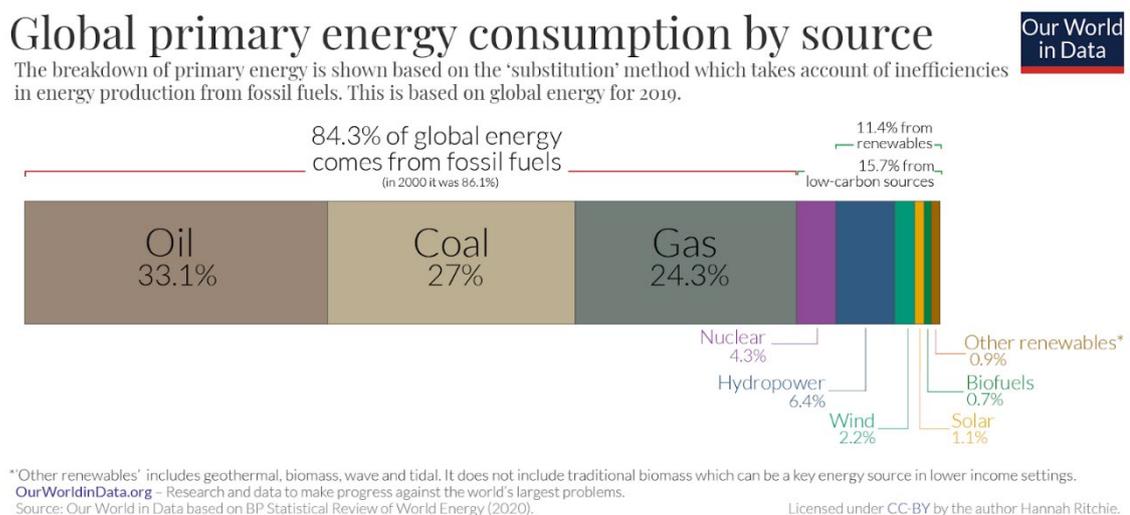


FIGURE 2-5 GLOBAL ENERGY CONSUMPTION BY SOURCE

Source: Our World in Data based on BP Statistical Review of World Energy (2020)

Apart from the above detailed affairs, urbanization, wildlife trade and agricultural issues form an important part of WWF's environmental framework as well. The understanding of the detailed concepts supports the importance of understanding the idea behind sustainability. To fight these problems today, will define the future of our children. According to Franklin D. Roosevelt, who stated the followings in his speeches:

“A nation that destroys its soils destroys itself.” (Letter to all State Governors on a Uniform Soil Conservation Law, February 26, 1937)

“Forests are the lungs of our land, purifying the air and giving fresh strength to our people.” (Statement on Being Awarded on Schlich Forestry Medal, January 29, 1935)

“Men and nature must work hand in hand. The throwing out of balance of the resources of nature, throws out of balance also the lives of men.” (Message to Congress on the Use of Our National Resources, January 24, 1935)

### **2.2.3 The pillars of sustainability**

The pillars of sustainability were defined first as the main factors of Earth’s welfare in 1980, in the World Conservation Strategy, created by the International Union for Conservation of Nature and Natural Resource (IUCN). In the creation of the strategy, several other environmentalist associations collaborated, such as the United Nations Environment Programme (UNEP), the World Wildlife Fund (WWF), the United Nations Educational, Scientific and Cultural Organization (Unesco) and the Food and Agriculture Organization of the United Nations (FAO). The strategy argued that in order to reach a sustainable development in the future, apart from the environmental, social and economic aspects of sustainability must be taken into consideration.

The illustration below was issued in the World Conservation Strategy (IUCN), which enhances the importance of sustainability. It has already been noticed 30 years ago that human need is increasing at such a fast pace that natural resources will not be able to keep up with it. As a result, a fast depletion of the environmental resources was expected by 2020. Consequently, our society is facing this issue today. To support the accuracy of this study, it has been also foreseen that within this time frame (1980-2020), the world’s population will increase from 4.000 million to 6.000 million. Unfortunately, by 2021 the world’s population has exceeded the expectations and almost doubled itself in the past four decades, by reaching 7.700 million people on the globe.

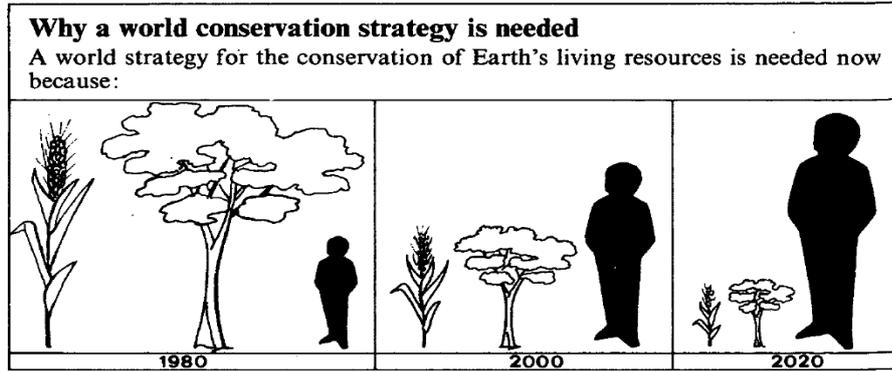


FIGURE 2-6 NECESSITY OF WORLD CONSERVATION STRATEGY

Source: World Conservation Strategy

The findings detailed above, highlighted the importance of a harmonized, good relationship between nature and humans. There are several other studies investigating the issues of social, environmental and economic sustainability. The SDGs of the United Nations detailed in Table 1, helps to understand sustainability as a whole, by setting its objectives in order to solve the major problems humanity is facing today. As a result, according to Rockström (2016) it can be related with the global issues, which can be categorized according to the three pillars of sustainability:

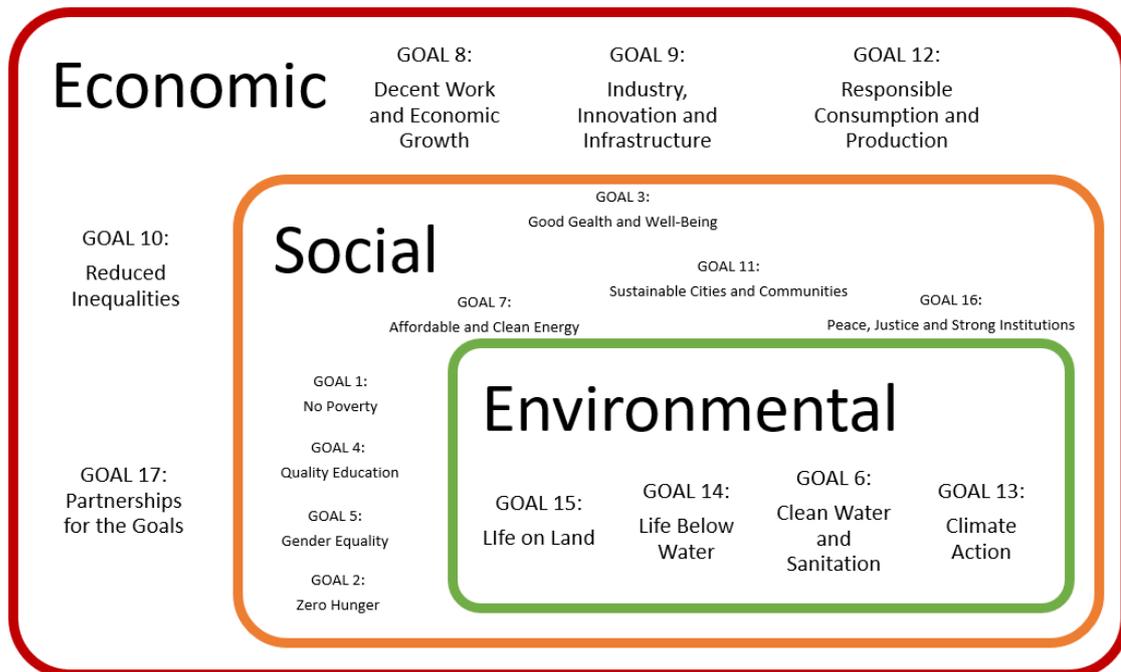


FIGURE 2-7 SDGs CATEGORIZED ACCORDING TO THE PILLARS OF SUSTAINABILITY

The chart above provides a basic overview about the economic, social and environmental issues of sustainability. These three indicators serve as the basis of the questionnaire, to measure the level of sustainability within an organization. Although environmental sustainability is the main

scope of the paper, it is very important to discuss all sustainability metrics. In the following paragraphs, each pillar will be discussed in detail.

### **2.2.3.1 Economic sustainability**

After the discussions of the previous paragraphs, the idea behind economic sustainability should be familiar by now. It became clear that several economists were supporting this approach. Constanza (1989) claims that the study of ecological economics is based on analyzing the relationship of the environment and economical activities. This ideology is the basis of this concept. Baumgärtner and Quaas (p. 2, 2009) has defined the concept according to the following four attributes:

1. "Subject focus on the relationship between human and nature."
2. "Orientation toward the long term and inherently uncertain future."
3. "Normative foundation in the idea of justice, between humans of present and future generations as well as their human-made substitutes and complements."
4. "Concern for economic efficiency, understood as non-wastefulness, in the allocation of natural goods and services as well as their human-made substitutes and complements."

Based on these four core statements about economic sustainability, it is argued that this approach is quite uncertain, therefore it is relying on the ethical arguments of the future (Baumgärtner and Quaas, p. 4, 2009). In the same investigation, the following two objectives of sustainable economics have been defined by the authors:

1. "Satisfaction of human needs and wants."
2. "Justice, including inter- and intragenerational justice and justice towards nature."

To conclude, this metric of sustainability indicates all approaches, which are contributing to a long-term economic wellbeing, without having a negative influence on either the social, nor the environmental element of sustainability. The approach of circular economy, which was detailed in Paragraph 1.2, is also a grounding pillar of the concept of sustainability.

### **2.2.3.2 Social sustainability**

In the main scope of social sustainability, the wellbeing of people and places are standing, by providing an understanding about the needs of individuals in every aspect of life and creating sustainable solutions through this knowledge. Researchers believe that there is still a high uncertainty regarding the definition of social sustainability. In the investigation done by the

following authors, H. Castillo, A. Price, C. Moobela, V. Mathur (2007), social sustainability was defined as “ensuring the well-being of current and future generations, recognizing every person’s right to belong and participate as a valued member of his or her community”. The importance of the mutual success of the three sustainability pillars, were highlighted by Torjman (p. 2, 2000) as the following:

“From a social perspective in particular, human well-being cannot be sustained without a healthy environment and is equally unlikely in the absence of a vibrant economy.”

Therefore, it can be concluded that one aspect does not exist without the other. In every setting of life, it should be practiced together.

### **2.2.3.3 Environmental sustainability**

All sustainability pillars are highly related to each other, therefore the success of one, defines the progress of the others. In the World Development Report published in 1992 by the World Bank, it was claimed that poverty is highly dependent on environmental conservation. The following paragraph was cited by Anand and Sen (2000, p. 2038), to support the statement above:

“The poor are both victims and agents of environmental damage. About half of the world's poor live in rural areas that are environmentally fragile, and they rely on natural resources over which they have little legal control. Land-hungry farmers resort to cultivating unsuitable areas steeply sloped, erosion-prone hill-sides; semiarid land where soil degradation is rapid; and tropical forests where crop yields on cleared fields frequently drop sharply after just a few years.... Poor families often lack the resources to avoid degrading their environment. The very poor, struggling at the edge of subsistence, are preoccupied with day-to-day survival. It is not that the poor have inherently short horizons; poor communities often have a strong ethic of stewardship in managing their traditional lands. But their fragile and limited resources, their often poorly defined property rights, and their limited access to credit and insurance markets prevent them from investing as much as they should in environmental protection.” (World Bank, 1992, p. 30).

After the World Bank’s publication, the concept of environmental sustainability was developed by Goodland (1995, p. 1-24), where he claimed that environmental sustainability “seeks to improve human welfare by protecting the sources of raw materials used for human need and ensuring that the sinks for human wastes are not exceeded, in order to prevent harm to humans”.

## 2.3 Environmentally sustainable “green” business strategy

The previous chapters provided an understanding about the increasing importance of sustainability and the complexity of the concept. Since the aim of this paper is to analyze the effects of an environmentally sustainable business strategy on attitudes and the behavioral changes of stakeholders, the existing research has been analyzed to gain a better understanding of a “green” business strategy. Gil Friend (2009) describes a green business, as one that is conscious about the negative environmental impacts, follows environmental regulations, has a green marketing strategy and a corporate social responsibility report (CSR), has environmental management systems, ISO 14001 strategy, has a long-term business plan and finally, has a positive impact on its surrounding. Based on these characteristics, he defined a green business as the following:

“Makes sense, in both the short term and long term. Makes sense, for itself, its owners and employees, and the living systems that support it. Operates lean, clean and green. Uses “green” to build profit and competitive advantage, and to reduce risk. Prospers by embedding the laws of nature at the heart of enterprise.”

Orsato (2009) argues that sustainable strategies should be transformed into a competitive advantage. Many companies realized that a green brand strategy can provide huge benefits. It has been studied that it is more likely that consumers buy a product which is “green”. Turning green is quite a challenge, but it serves the long-term prosperity of the organization. Usually, it comes along with two main benefits, which is cost saving and revenue rising (Khadri, 2018). By being aware of the major environmental issues we are facing today, the environmental transformation of business strategies became rather a necessity. This has been also claimed, as one of the driving forces of sustainable businesses. Orsato, the author of “Sustainability Strategies - When does it pay to be green?” claimed:

“The management of environment-related costs and risks are part of the operational effectiveness of any company and simply cannot be avoided.” (Orsato 2009, p.26)

The depletion of raw materials is also an important factor, which related organizations have to take into consideration. The change of these materials requires a different supply chain model, which requires a long period of planning and a good change strategy. It has been also discovered that businesses who define the incentives of becoming green, are more likely to reach their

objectives and increase business performance (Olson 2008, p.6). Government policies are an important force as well, which also increase and motivates the sustainable changes in the strategy.

### **2.3.1 Challenges of implementing a green strategy**

Although it became a necessity of turning a business green and it comes with several benefits, it is a true challenge to implement a green strategy in a company. It not only requires to change the work processes, supply chain and material use, but the mindset of its stakeholders as well. One of the main barriers to turning green is the lack of capital. Several organizations only concentrate on the investment the strategic change requires, rather than on the long-term benefits. This is especially true in small enterprises, where the budgets are very strictly distributed and costs are only associated with profit generation for the supervivancy of the firm. It was investigated that the organizational structure has a great influence on the success of the application of a green strategy (Epstein 2008, p.254). The management of the company has to be highly involved in the implementation process and share the values, which the strategy represents. This is crucial to a successful strategy application. Large corporations have already adopted a more conscious, sustainable mindset, which serves as a motivating factor for other CEO's.

Epstein and Buhovac (2010, p. 307) proposed that the major challenge for implementing a sustainable strategy, is the failure of setting clear and measurable objectives. As it was already mentioned before, financial pressures are to be considered as one of the obstacles of such a strategy implementation. The authors also considered the reactions of stakeholders as a challenge, whereas they claimed:

“Adding to the challenge is uncertainty about how different stakeholders will respond to various sustainability actions and performance through time. Corporate and societal priorities often change, as do the costs of implementing sustainability. All these issues make the decision-making associated with sustainability implementation particularly challenging.”

The question about overcoming the challenges of the implementation of a green strategy is whether business owners realize that its benefits in the long run are far more important than the difficulties in the short run. Limited findings were available about the generational challenges. Yet, it is important to mention that the managers and CEOs of the baby boomer generation, most likely being a business owner or in a director position for almost 20-30 years, most likely are facing more difficulties adapting to a green strategy. The concern behind this argument is rather related to the fear of any change within the organization and the lack of motivation to

overcome these challenges. As a solution, younger generations have been raised with a more conscious mindset and those reaching managerial positions, will be able to contribute significantly to the implementation of a sustainable mindset (Koger, 2013). This will be analyzed further in Paragraph 2.4, by digging deeper in the psychological and behavioral aspect of the subject.

## 2.4 Psychological behavioral aspect

Based on the findings of the previous paragraph, one of the major challenges of implementing a green, sustainable strategy is its effect on the stakeholder's behavior and attitude. According to Epstein (2008), there is a significantly higher productivity level in those companies, where a green strategy is being followed. Furthermore, its employees tend to be more satisfied. This concern is in the main scope of this thesis, which was measured through the survey. Before analyzing these findings, it is important to understand the influential factors of an individual's psychology.

Existing literature has argued that the main problem behind environmental issues is human nature. Therefore, the solution towards environmental issues may be tackled by changes in human behavior and attitude. One instrument which helps to understand how human behavior works is the Theory of Planned Behavior (TPB). The TPB was introduced by Ajzen in 1985 and it suggests that the behavior of an individual is predictable in a certain situation at a specific time and place. According to the theory there are three determinants to an individual's intentions, such as personal attitudes, subjective norms, and perceived behavioral control. The diagram below illustrates the whole idea behind the TPB:

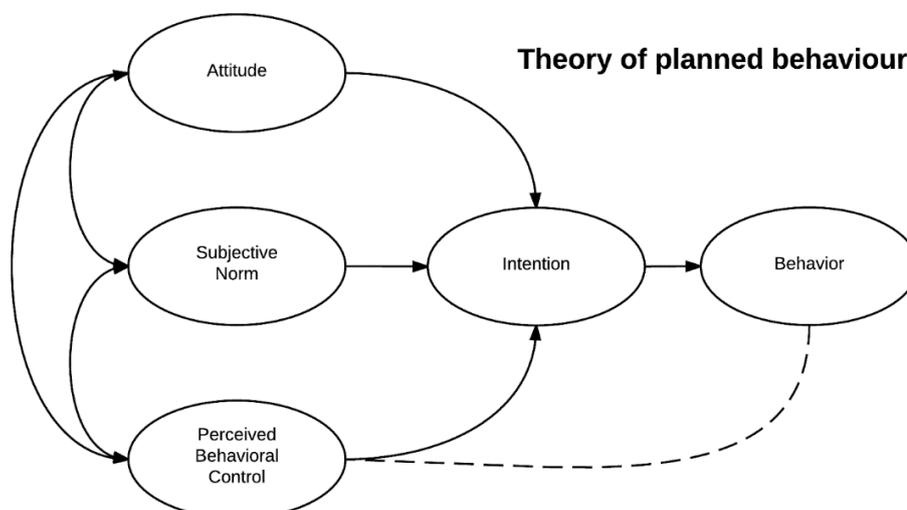


FIGURE 2-8 THE THEORY OF PLANNED BEHAVIOR

SOURCE: (AJZEN, 1991)

This theory was used in several fields to understand how human behavior works. In order to get a better understanding about the main idea of this study, an example in the context of environmentalism will be provided. For example, if an individual lives in a community where there is an absence of pro environmental attitude, it means that the perceived behavioral control is low, so it has no influence on the individual's intention to engage sustainably. Subjective norms refer to the social pressure, which means the closest circles of the individual have a positive attitude towards environmental friendliness; therefore, it is more likely that it will affect him/her in the same way.

After reviewing several articles related to the TPB, an important factor to mention is the industry and the age in which the studies were conducted. In general, those individuals who are moving in an environmentally oriented industry are more likely to be affected in their personal decisions regarding sustainability by the attributes of the industry. Research conducted by Lee et al. in 2012 studying the green consumer habits in the fashion industry, for example, discovered that green brands have a great impact on the environmental consciousness of the consumers of such brands.

#### **2.4.1 Psychology of sustainability**

The psychology of sustainability is studying to what extent sustainability impacts human behavior, by analyzing what motivates an individual to act more consciously in their daily life, their connection with the environment and the overall effect on these individual's wellbeing. The question was raised by Cooperrider and Fry in 2012 in their research about the positive psychology of sustainability – is an organization with sustainable values able to influence well-being, health, motivation and performance of its employees? The authors have investigated this topic at a large scale and the following observation was highlighted as a conclusion of their research: “there is nothing that brings out the best in human enterprise faster, more consistently or more powerfully than calling the whole organization to design sustainability solutions to humanity's greatest challenges”. They suggest that in order to flourish – not just in sustainability, but in every other aspect of life - positive psychology serves a great role. Seligman (2010, cited by Cooperrider 2012) refers to the dimensions of good life through the PERMA model, which according to Cooperrider is a great summary of the drivers of positive psychology. **P** as **positive emotions**, are investigating why positive emotions such as joy, motivation or empathy are good

emotions. **E** stands for **engaged life**, which refers to a state where an individual embraces his/her greatest strengths and how this circumstance of productivity and happiness is transferred to the work environment. **R** as **relationships**, meaning the “role of the other” in life. **M** refers to **meaning** and **making**, to create something in life with a purpose, which is the only way to allow an individual to flourish. Finally, **A** which serves for **accomplishment** – to close the circle – leaving a footprint in life. Following the lead of positive psychology, sustainability could simply become a part of every day’s life. The studies of Cooperrider and Fry (2012) were considered to be one of the existing materials found in the topic standing the closest to the subject of this research.

## 2.5 Sustainable work environment

We can call a work environment sustainable, where all the three pillars of sustainability are noticeable. Nowadays, more and more companies are striving to create a sustainable work environment. The corporate world is aware of the important role they are playing in the rising environmental issues such as global warming or the environmental deterioration in the past years, which creates a greater pressure on shifting businesses to a more sustainable way of operating. Most employers have realized that the more attention they are paying on the wellbeing of their employees, the more they are thriving. This attention refers not only to the monetary benefits of the job, but rather the additional attentiveness on social sustainability aspects in the workplace. Sustainability in business could be defined as creating a better life quality for everyone on the planet – referring to the environment – by acting responsible in the economy and maintaining an equal social duty, meanwhile successfully protecting our environment (Cavagarno and Curiel, 2012). As the core of sustainability, in this case we can also refer to the three pillars of sustainability – environmental, economic and social – to understand the benefits of a sustainable work environment.

### Environmental Benefits

Probably this is the aspect where it is the most difficult to implement green strategies, because of the high costs of introducing an ecological infrastructure. The challenges of implementing a sustainable strategy were analyzed in Paragraph 2.3.1, which provided a basic understanding for the subject based on existing findings. There can be very simple steps to make a workplace more sustainable, such as installing geothermal heating, recycling empty bottles, providing reusable cutlery, turning off unused lights, not using air condition senselessly, working paperless, etc. In general, by conserving daily resources, a significant difference can be made with quite a low investment. These are just one of the many steps that can be changed for a greener work

environment. These aspects will be analyzed in the survey conducted, which serves as a basis of this study. Hopefully, by 2025 most of the workplaces implement these changes. On the other hand, there are some larger investments, which should be planned in advance when creating a work environment, one of them is the construction of a green building. This is an integrated process that focuses on the built and on the natural environment, by using sustainable materials and integrating low energy and water consumption to minimize pollution. (Iberdrola, 2021) According to data retrieved from the United Nations (UN), in 2050 around 68% of humanity will live in cities, which will only represent 3% of the planet's surface. Sadly, they will consume 78% of energy and produce 60% of greenhouse gas emissions. Therefore, the UN has established in 2016 the New Urban Agenda to prevent and advise future constructions.

### Economic Benefits

Green buildings are not only environmentally beneficial, but they are designed to require less maintenance, approximately 20% less than an average building. Therefore, living in a green building is economically more beneficial. Other benefits of sustainability can be considered significant savings in materials and other costs in the long term, with a higher initial investment. There is a lack of information about the influence of a sustainable workplace on the financial activity of its employees, this will be analyzed further in this paper.

### Social Benefits

Human resources are one of the main tools of implementing sustainability at the workplace. HR practices are not only supposed to focus on human rights or employee burnout, they should be responsible to raise awareness about the environmental, economic and social values of the organization. Sustainable HR practices should be able to create an organizational culture which highly values sustainability. Samul (2019) defines a sustainable workplace as "a positive workplace that has a contribution to improved work-life balance, employees' well-being, involvement in ethical and social decision-making, and develops awareness of being a part of the whole (community and the world); the awareness of the connection with larger whole causes that employees are innately involved in taking care of other people, an organization, or an environment". This definition complies perfectly with how a socially sustainable workplace should be.

Ideally, companies try to fulfill the previously highlighted factors to create a highly sustainable work environment. However, some businesses might deceive their stakeholders through a practice known as "greenwashing". Due to the pressure companies receive in order to turn green, in some cases they are not able to reach the expected criteria at the pace the market requires it.

Therefore, in order to avoid losing stakeholders or showing them a bad image, some organizations give the perception of being more sustainable than they actually are. This phenomenon is defined as “the intersection of two firm behaviors: poor environmental performance and positive communication about environmental performance” (Delmas et. al 2011, referred to by Netto et.al, 2020) Apart from the negative image organizations can create for the external stakeholders of the company, the damage that they can cause internally can be even higher. Since this paper centers on the effect of business behavior on employee attitudes, the effect of greenwashing on employee’s will be investigated. However, it is important to mention that the same is true to this scenario as for the main research’s, there is lack of existing knowledge available analyzing the effect on employee’s behavior. The findings of Netto et. al (2020) suggest that the perception of greenwashing practices may cause employees to attribute organizational personality traits to the organization and cause them to believe the greenwashing organization is dishonest. Additionally, the results of organizational wrongdoing may depend on the personalities or stakeholders, according to theoretical studies (Barnett, 2014 referred to by Li et. al, 2022). There is more likely to be a mismatch between the employee and the organizations, when the employee has a high sustainable consciousness and considers this as an important value. Conclusively, the more an employee shares a pro-environmental mindset, the more skeptical the organization will be, and the worse their performance on the job (Li et. al, 2022). The perception of greenwashing among employees is detrimental to their sense of company pride, affective commitment, and career happiness. Greenwashing also has a positive effect on unpleasant feelings (Santos et. al, 2022). This is considered to be another negative effect of green washing on employees’ which must be considered, the damaging effect this way of operating can cause in the employees’ personality or private behavior. If such individuals are working in the organization, whose commitment is not strong to sustainability, these feelings can be confirmed through the hypocrite behavior of the enterprise.

## **2.6 The positive impact of green work techniques on employee attitudes**

The main purpose of this paper is the investigation of the impact an organization has on employee’s sustainable attitudes. Sustainability has been a rising topic in the past years, which is becoming more and more powerful. Organizations realized that happy employees are performing better, they are more creative, productive and better in problem solving. The question is, is there a correlation between a sustainable workplace and employees with pro-environmental attitudes? Do these employees are happier because the organization puts a great emphasis on

sustainability? These questions will be answered at the end of this paper, until then, the existing research related to this topic will be studied.

There are some companies, which should serve as an example in their sustainability journey. One of them is Burt's Bee's. The company was purchased by Clorox in 2010. Burt's Bee's was already famous for their sustainable products (Westaway, 2013). But no one knew the emphasis that the then director John Replogle had put on the internal - social sustainability – of the company. According to Shawn Achor, who is known after his studies about how happiness precedes success, in an article he wrote in the Harvard Business Review in 2012, he explained that John Replogle made several training sessions for the company's management about employee happiness during the acquisition process. The director was worried that the joining of a company such as Clorox – so different from Burt's Bee's in every aspect - would demotivate employees. He made sure to remind them about the values the company stands for. This actually led to a successful acquisition, by keeping and increasing employee satisfaction and happiness thanks to his efforts. His positive leadership strategy had an effect on the whole workforce. After years it turned out that Clorox not only acquired the company, but they have also changed their values and sustainability strategy based on Burt's Bee's. The companies have been growing together since then. As a conclusion, if sustainability is taken seriously from the management and integrated properly in the company's strategy, it can lead to great results.

Walmart has also made important changes in their sustainability mindset by including Personal Sustainability Plans (PSPs). PSPs are where employees are requested to provide ideas in order to improve the company's pro-environmental attitude. PSPs have raised not only employee engagement, but employee awareness, since they were required to investigate the topic of sustainability and it had a great effect on their personal lives, family lives and community lives. Some of the feedback Walmart has received from its employees participating in the Personal Sustainability Plan (2007, p. 1-2) program include:

- “PSPs gave me a purpose to attack some of the things I wanted to work in myself. “– Chuck Bonnet, a Walmart employee who lost 10 pounds in two weeks.
- “We're going to succeed because it is coming from us – your associates-not from corporate.” – Monika, a Walmart associate who quit smoking as part of her PSP.
- “I've challenged all my neighbors to purchase squiggly bulbs and a lot of them do it. My neighborhood alone has almost purchased 200 bulbs!” – Tony Rotella

- “It’s about everyday choices. Together, if we all do what is right – replacing traditional light bulb with a compact fluorescent light bulb or winterizing your house – we can build a more sustainable future for generations to come.”

These are some real-life examples, which serve as proof that a sustainable company mindset does have a great influence on employee’s lives. The key to success is to integrate sustainability in the company’s daily life and to involve employees in the value creation process. Regarding the social sustainability part of a work environment, maintaining employee happiness by acknowledging their effort, making them feel important can significantly increase productivity and well-being.

A green work environment can have a great impact on strengthening an individual’s sustainable mindset. As it was detailed in Paragraph 2.5, eco-neighborhoods, green buildings, and other urban initiatives aimed at lessening the negative effects of human activity on the environment and altering how people live to make them more mindful of their surroundings. These are not only affecting the economics of a business, but it can have an important impact on the environmental behavior of the employees.

In this paragraph, research was conducted into the “real-life” examples, looking for real employee experiences and case studies, which was introduced previously. Following that, rather academic research has been completed to investigate the results of other studies in the field. Thus, a greater understanding has been gained about the influence of a sustainable strategy on the workforce. Most academic research studied the influencing factors of pro environmental behaviors (PEB), but few of them were actually analyzing the influence of the workplace on PEB. It has been determined that internal and external factors are influencing PEB. In this setting, one of the external factors is considered the workplace. Based on the investigation of V. Blok et al (2014), if a work environment provides the possibility of recycling, offering electrical vehicle charging, regulating heating and lights individually or offering sustainable products, employees are going to use these opportunities. Therefore, their behavior at the workplace will be PEB. Taking this matter to the next level by raising the question – do employees with a PEB at the workplace act the same in their lives outside at work? As it was highlighted before, there is a lack of studies related to this theoretical question. Yen and Yen (2012) found that additionally to provide a sustainable work environment, the primary driver of a firm’s success in adapting a pro-environmental mentality, is management. Only management has the power to strengthen an employee’s relationship with sustainability, by integrating it profoundly in the firm’s daily strategy (Shubhatra Bobby et al., 2003, cited by Blok 2014).

It is crucial to mention some techniques which organizations can use to promote green employee behavior (EGB). Employers try to promote EGB by fostering the idea that it is valued by enhancing the performance in the physical setting. According to Manika et. al, 2018, some tools used by companies to support EGB, could be leader endorsement or incentives. It was highlighted before in previous paragraphs; management plays the most important role in this process. The same study (Manika et.al, 2018) claims that leaders are in a position to communicate, serve as an example for the EGB they want their team members to adopt, and stress the significance of engaging in these behaviors. Incentive schemes can be monetary or non-financial. The latter can include environmental gifts or experiences, as well as public acclaim and recognition. This is in line with the self-determination theory, which holds that activity is launched more frequently, is more persistent and results in higher-quality performance when motivated by personal desires as opposed to external rewards (Gagné and Deci 2005, referred to by Manika et. al, 2018). If organizations practice a high level of sustainability and intend to hire individuals with strong green mindsets, non-monetary incentives can be an efficient tool. Consequently, each organization has to find the right tools depending on their own setting. It was also found that environmental policies and procedures can influence EGB. Other studies discovered investigating ethical leadership, that a corporate environment with such managerial characteristics is able to encourage green activities. Employees' unforced and impulsive pro-environmental behavior are crucial to the success of firms' environmental strategies (Saleem et al., 2021).

## **2.7 Consequences of sustainable business behavior on employee's**

The main thread of this paper is to find the link between business behavior and employee attitudes in the context of sustainability. The previous paragraph emphasized the importance of methods that deeply involve employees in the sustainable strategy of the company and highlighted its benefits. This paragraph intends to summarize the existing knowledge available related to the main research problem of this study. In general, there is a lack of empirical literature available directly related to this topic. As the findings of Huffman and Klein (2013) confirms as well, individual behaviors, such as recycling or energy saving, have received the most attention in the psychological literature on environmental sustainability in both work and non-work settings. The above cited authors also claim that two complementing methods, named as person-based and intervention-based can be used to influence employee behavior. Person-based strategies take use of individual differences and seek to change organizational behavior through careful selection of staff members. On the other hand, intervention-based approaches assume that

the workforce composition is what it is, and they concentrate on changing employee behaviors through organizational, educational, and motivational strategies.

Several studies confirmed that a crucial factor of enterprises with green strategies having the intention of influencing the employees in an environmentally positive direction, relates to the hiring processes. (Huffman and Klein, 2013). Organizations lack resources to teach and develop employees in social skills and empathy, for example. According to the research of Karnes (2008), employers who are receptive to providing their staff with what they require and want are much more likely to succeed. More significantly, however, these businesses will be acting morally. A similar point of view is shared in the research of Ruiz-Pérez et. al, 2021. In the research of the previously mentioned authors, a reversed view is provided on the relationship between business behavior and employee attitudes compared to this paper. The findings of this paper suggest that employees are the most defining influential element of corporate sustainability. Other researchers have confirmed as well that the impact of Corporate Social Responsibility or corporate sustainability practices on employees has been still largely unknown (Choi and Yu, 2014). However, some studies indicate that employee perceptions of corporate social responsibility (CSR) are positively related to organizational commitment (Glavas and Kelley, 2015). This demonstrates that sustainable business behavior does have a positive effect on employee attitudes and behavior in a corporate setting. The findings of Choi and Yu (2014) suggest that corporate sustainability initiatives are supportive tools to enhance company performance and employee loyalty.

As the previously detailed findings indicate, several studies have been conducted on the relationship of business behavior and employee attitudes in a corporate setting, which resulted in a positive relationship according to the existing knowledge available. However, it has not been determined to what extent these initiatives motivate employees of organizations to behave responsibly outside the office. Research made by Abas and Dogan (2014) on “The impacts of organizational green culture and corporate social responsibility on employees’ responsible behavior towards the society” suggests that employee behavior has been found to be considerably altered by OGC (Organizational Green Culture) and CSR initiatives and as a result, they are more likely to act responsibly in public. This report also suggests that businesses should implement OGC and CSR practices, since based on the findings it encourages employees to act responsibly toward others and contribute to society as a whole. Also, female employees tend to act more socially than male employees. This factor is measured in this research as well, which can be found in Paragraph 4.4.2.

The majority of pro-environmental actions that psychological research has so far examined are “undertaken as part of one’s personal life” (Ones and Dilchert, 2012 as referred by Huffman et al, 2013). The same authors distinguish between two behaviors: employee green behavior and pro-environmental behavior. The latter was considered to have a fully personal basis of choice. Whereas the other type of behavior, EGB, is considered to be the subject to more scrutiny and may even be mandated by businesses as a part of employees’ job responsibilities. To summarize, this research suggests separating individuals' green behavior in the workplace and their private life, since it is considered to have different influencing factors in different environments, which cannot be compared. This research intends to prove the contrary, whether the green behavior employees acquire in a corporate setting through the sustainable behavior of the employer organization, can create a lasting effect on their pro-environmental behavior in their personal lives. It is clear that there is an existing research gap, which exclusively investigates the previously described relationship.

Emotions are considered to be an important aspect when it comes to analyzing the behavior of individuals. Sustainability is considered to be a positive factor, since it promotes economic, social and environmental wellbeing. Therefore, if individuals are properly educated in the field and sustainability is integrated in their corporate life, it would enhance positive feelings. If an individual knows that his work, actions or attitude contributes to a positive factor, such as sustainability in this case, the outcome would make them feel content and important, because of their positive contribution. This is an aspect, which should be highly considered by organizations to promote and motivate a green citizenship behavior. According to the social exchange theory, workers who practice environmentally friendly conduct at work, are more likely to have a higher self-esteem, which will improve their well-being (Zhang et al., 2021). Therefore, it is considered that employees who are able to pick up such behavior at the workplace and have these feelings, have a higher chance to continue the same behavior outside the work environment, to keep the feeling of such a flourishing estate.

## **2.8 Conclusion**

After studying several resources in the field, this literature review first provides an understanding from the basics of sustainability to a more specific field, which is the main investigational area of this thesis: the influence of a pro-environmental organization on the workforce. When a study is about sustainability, authors might notice how extremely broad this topic is and how many different meanings it can have. After reading several ideas about the material, including asking friends and colleagues about the topic, I have realized that many of us have different

ideas of what sustainability is. With thousands of users competing for attention on social media sites, sustainability has emerged as a trend. Unfortunately, we have distorted what "sustainability" really means. By giving our time and energy to the noise of social media and following trends, we are daily becoming more dazed rather than strengthening our connection to nature. We must re-establish a connection with nature and acknowledge our interconnectedness with it, if we are to see real change. Reusing, recycling, composting, or wearing environmentally conscious clothing are not the initial steps to living more sustainably. These are effective activities, but if one does not fully understand why these decisions are taken, they are pointless. Just as Aristotle said, "We are what we repeatedly do".

This literature review also serves as a summary of how environmental issues are rising and how it has been addressed through sustainability. Consequently, the question arises: *what happened in the last three decades?* As existing research shows, sustainability has been on the table for many years now. Unfortunately, our civilization has always faced economic and social issues, which were considered as human errors that could be avoided by making different decisions, such as wars or the housing crisis in the USA in 2008. Yet, they still have/had a great effect on our society and are still today's greatest issues. Environmental problems are also a consequence of human decision making, but the results of these issues are much more complex and difficult to solve than the others. It has an impact on our whole existence, on the future of civilization. Probably by today we all know the solution, but just as for the social and economic issues of the world today, decisions must be taken as one, all the countries should be standing for planet earth and for humanity to let it continue to flourish for many more centuries. As it was concluded in Paragraph 2.6, management is the main driver of sustainability within an organization. The same is true for the bigger scale, only world leaders and politicians have the power to embrace sustainability and make pro environmental decisions. A theory which I believe has great power on how sustainability is embraced, was articulated by Cooperrider and Fry (p. 9, 2012): "When sustainability is constructed and defined simply as surviving, it loses its capacity to inspire. But when sustainability is seen not as surviving, but thriving, whole new vistas rapidly emerge including a reunion with the spiritual dimensions or higher reaches of humanity's sense of meaning, purpose and significance". Sometimes, adjusting the perspective can be a game changer.

## 3 METHODOLOGY

### 3.1 Introduction

The previous sections of this paper provided the reader a deeper understanding about the field of sustainability and the importance of this research, through analyzing existing knowledge which supports the research problem of this thesis. The methodology of this paper is going to introduce the structure and of the conducted research, by analyzing the logical choices behind the decisions made throughout this study.

### 3.2 Methodological approach

This paper investigates the relationship between business behavior and sustainability and its effects on the behavior and attitudes of employees. The main question to be answered in this study is:

*Is an environmentally sustainable work environment able to influence employees in a positive way?*

This question investigates a cause-and-effect relationship, which could have either positive or neutral results. A positive answer for this question is the following: If an organization is environmentally sustainable, it has positive effects on employee attitudes and behaviors. This is the outcome that this research aims for. The following statement serves for a neutral outcome: If an organization is environmentally sustainable, it has no effects on employee attitudes and behaviors. In case results show that the latter argument is true, it would mean that individuals are picking up their pro-environmental behavior outside of their work environment, therefore there will be no correlation between sustainable business behavior and employee attitudes.

In order to answer the question above and confirm the detailed cause and effect statements, a survey has been conducted. This serves as the primary research of this paper, which gathered quantitative data. The survey was designed to measure several factors, which allows to analyze the results statistically. It measures the level of sustainability of the employers of participants as business behavior, and it gathers information on whether the individual has a pro-environmental mindset. Finally, it investigates the correlation between business behavior and employee attitudes. This will be introduced in detail in the upcoming chapters.

In the preliminary data gathering process of this study, it became clear that there is a lack of understanding what sustainability means in general and some individuals were struggling to

define it. In order to fill this gap and to provide a better understanding, several interviews were conducted with high position professionals with different backgrounds. The reason why only individuals in management positions were asked, was to get a deeper insight into the sustainable mindset of those, whose opinions have a great influence. Also, existing knowledge has shown that companies where management was leading with a sustainable attitude are more successful overall. (Yen and Yen, 2012) These interviews will contribute to the research material with qualitative data. The organization and the idea behind conducting these interviews, will be explained in Paragraph 3.4.2.

Due to the lack of understanding of the subject of sustainability, this paper was designed intentionally to provide a basic understanding of the field, before analyzing the primary data collected by the author. This allows readers to better understand the material and the objectives of this research. In the following paragraph, the decisions behind the choices throughout this study will be discussed.

### **3.2.1 Choice of methods**

The reason behind choosing a survey as the main research method, is because this was the most flexible yet accurate tool which allowed me to gather the necessary information for answering the research question. One of the objectives of this research was to get a broad overview of the sustainable background of several organizations with different cultures, industries and located in multiple countries. Additionally, surveys can be filled out anywhere in the world, therefore it was crucial to find a solution where no personal meetings were needed. Since sustainability is a global issue, by today, every company and individual have to be familiar to some extent with this concept and the issues our civilization is facing. Google Forms was used as an online survey creator, because it offers multiple question types, which was a key aspect to include in this survey. This allowed me to place multiple-choice, closed and linear scale questions, as well as checkboxes. This will be detailed further in Paragraph 3.2.3.

## **3.3 Research question and hypothesis**

This study includes two research questions. As it was introduced previously, the main research question for this paper is:

*Is an environmentally sustainable work environment able to influence employees in a positive way?*

This research question addresses a similar problem as Cooperrider and Fry in 2012 in a slightly different context, whether an environmentally sustainable work environment has a positive influence on employees. In order to investigate the topic in detail, a null and alternative hypothesis was proposed which serves as the prediction of the possible outcomes. The null hypothesis for research question one, serves for H<sub>0</sub>:

***H<sub>0</sub> - An environmentally sustainable work environment has no influence on employees.***

H<sub>1</sub> refers to the alternative hypothesis of the first research question:

***H<sub>1</sub> - An environmentally sustainable work environment has a positive influence on employees.***

The hoped outcome in this hypothesis is whether the influence is positive, which means that a sustainable work environment is able to change employee behavior in a positive way. In this research question, the studied group is at a larger scale –it refers to any individual working for a pro-environmental company. Since the whole population cannot be tested, a random sample group was selected, where data was collected about the effect of business behavior on employee attitudes. The only requirement for the survey participants was that they should be employed. Although mainly those individuals were targeted whose employer organization has a green strategy, through the snowball effect in order to gather more participants for the survey, the corporate background of the research became very colorful. This means that the main variable in this research is whether the organization is sustainable, or to what extent.

In order to receive more accurate results, the survey was designed to measure whether employees are the ones seeking to work in organizations with a green strategy. The following question will help to find those individuals, who were already armed with a pro environmental mindset. This allowed me to refine the results and exclude those answers, which are not directly relevant to the specific research. The supportive research question is the following:

***Do enterprises with sustainable strategies attract employees with a pro-environmental mindset?***

A null and alternative hypothesis has been defined for the latter question as well. In this scenario,

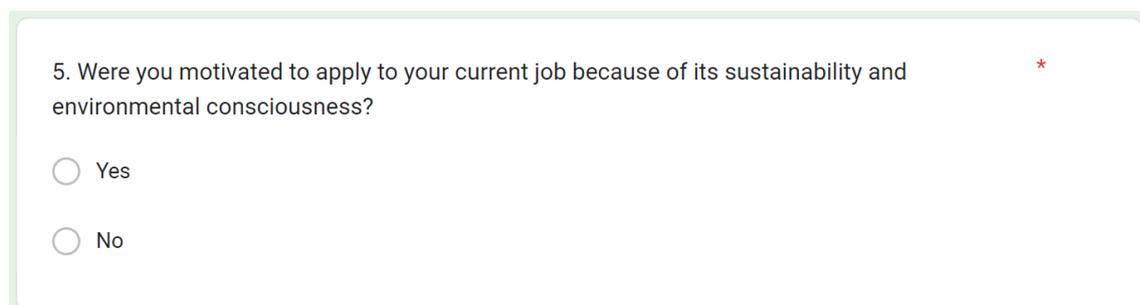
H<sub>0</sub> serves for null hypothesis:

***H0<sub>2</sub> - Enterprises with sustainable strategies do not attract employees with a pro-environmental mindset.***

If results confirm that the statement above is true that the majority of the participants were not motivated by the company's sustainability. As for the alternative hypothesis for research question number two, H1<sub>2</sub> stands for:

***H1<sub>2</sub> - Enterprises with sustainable strategies attract employees with a pro-environmental mindset.***

In case that H1<sub>2</sub> is correct, the responses will be analyzed separately and will relate back to the main research question, by analyzing the fact that individuals working in a sustainable organization due to self-motivation, doesn't necessarily mean that the company has had no further positive influence on their sustainable behaviors and attitudes. This correlation addresses as a problem a gap in evidence whether sustainable enterprises attract employees with a pro-environmental mindset or not. This question was designed to be added in the questionnaire, since it was relatively easy to include in the logical structure of the survey. The questions of the survey can be found in Appendix 1, where the related question can be found as following:



5. Were you motivated to apply to your current job because of its sustainability and environmental consciousness? \*

Yes

No

FIGURE 3-1 QUESTION 5 - SURVEY

Just as for the previous research question and hypothesis, similar specifications apply. The context is relevant for any employees with a pro-environmental mindset as the main group analyzed. The variable in this case is whether the responder has a pro-environmental mindset or is just simply appealed to by the green strategy of the company. Consequently, this question opens several doors for further investigation, yet most importantly it measures whether employees have decided to work in the specific organization, because both the organization and employee share the same pro-environmental mindset.

### **3.4 Data collection methods**

Literature review introduced the existing knowledge related to the material. The data used there was gathered through online books, journals, scientific articles and company case studies and other web pages. This should serve as a basis for the information gathered through the primary research of this paper, which is the survey. Main data was collected through this specific survey, which will be detailed in the following paragraph. In this paper, existing scales were not included, because there were no items available that were appropriate for the topics or anything similar which would have served the goal of answering the research questions. Each of the questions included in the survey were designed especially for this study. Supporting data was collected through micro interviews. The concept of these interviews will be introduced in Paragraph 3.4.2.

#### **3.4.1 Structure of the survey**

The data gathered through the conducted survey serves as the basis of this paper. It was designed to measure the distinct levels of sustainability within the employer organization and the participant itself. It was constructed to analyze the three pillars of sustainability; social, economic and environmental sustainability, considered as business behavior. However, the main focus in the survey was on environmental sustainability, as the main scope of this paper. The survey has seven stages, where each of them measures a different variable. In order to get a better understanding, the following figure illustrates how the survey was created:



FIGURE 3-2 SURVEY STRUCTURE

After getting a visual overview about the structure of the survey, a detailed guide will be explained in the following section of the paper. The numbers indicated in the end of each section correlates to the number of the actual questions in the survey.

**Awareness and Influence Control Questions:**

The first and last phase of the survey, the awareness and influence control, consists of the same question. The first question measures the actual awareness of the individual about sustainability within the specific organization. The question relates to the three pillars of sustainability by explaining to the participant what each pillar (social, economic and environmental) means. The decision behind including a short definition was to help participants by getting a brief understanding about the topic, so they are able to perform more concentrated during the completion of the survey. Also, experiencing the lack of knowledge related to sustainability in some cases during the first data gathering phase for this paper, made me realize that while several people cannot define sustainability, they were actually talking about it, they just had difficulties in relating the material to the phenomenon – the world sustainability. However, the lack of this knowledge can relate to the poor or no integration of sustainability in the employer's strategy, therefore negative answers can mean that the level of sustainability within this organization is really low. On the other hand, there were cases where participants responded with a very low rate and after answering the rest of the questions, showed that there is actually a higher level of sustainability within the organization. This was the main goal of designing these questions, since in that case the last – influence control question – will provide the more realistic answer for this question. Those participants who answered these questions in the same way, can be considered as the group of individuals with high sustainability awareness. Since employees from different companies filled out the survey, these questions were designed as a 5-point Likert scale (1 not important and 5 very important), in order to measure the actual level of social, economic and environmental sustainability of the different organizations. This phase includes question 1 and 29.

**Phase 1:**

This phase was designed to actually measure the level of social and economic sustainability of the employer organization. In this section, two 5-point Likert scale (1 not true at all and 5 absolutely true about yourself) questions were placed. The first question focuses on social sustainability and includes 13 statements, which measures the wellbeing, flexibility and various non-monetary benefits the company can provide to its employees. To follow, the second question controls the economic sustainability of the enterprise, with 12 statements providing different choices, to be able to suit every participant's situation. The data gathered in this phase is considered as the social and economic part of the business behavior. This phase includes question 2 and 3.

**Phase 2:**

After phase 1, data was gathered to evaluate to what extent the employee and its company is environmentally sustainable. In order to keep the concentration of the participants, less complex questions were included. This section has started with a question related directly to the participant, which also supported a more focused completing process. To follow it continued with questions mainly investigating how strong is the green strategy of the organization. Phase 2 includes 8 questions, mixing multiple choice and yes/no options. Results allow us to run tests in different areas of importance; these will be detailed in Chapter 4. The environmental sustainability of the enterprise was investigated through 5 multiple and simple choice yes/no/no, but I would like it questions. The “No, but I would like it” response option measures the tendency of the employee needs for more environmental sustainability within the organization. Questions 5-10 are analyzing the environmental business behavior of the enterprise. After completing this section, results are clearly showing the level of sustainability within the organization. Furthermore, it will also be clear whether employees have a pro-environmental mentality without the influence of the company. This phase includes questions 4, 5, 6, 7, 8, 9, 10 and 11.

**Phase 3:**

This phase is the most crucial part of the survey, since it gathers data regarding the main research topic of this paper, which is the link between sustainable business behavior and its influence on employee attitudes. Additionally, it also monitors whether other stakeholders, such as colleagues, had a positive effect or any influence on an employee’s behavior. It keeps the tendency of rather simple questions to keep up attention, closing with a 5-point Likert scale evaluation of 11 statements, which is considered to require more attention to focus on understanding and answering correctly. Overall, 9 multiple choice and simple response questions including the one Likert scale, investigated whether the work environment had a positive influence on the attitude of the individual regarding environmental sustainability. This phase includes questions 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20.

**Phase 4:**

Questions in phase 5 support the survey by gathering general data through such questions as gender, age, experience level, geological location, highest qualification and company name and size. This phase includes questions 21, 22, 23, 24, 25, 26, 27 and 28. Several participants have reached out in order to inform me that they are not able to share their employers name, since the organization where they work has very strict rules regarding the use of the brand.

Consequently, in order to evaluate the sustainability of the organizations, results have been analyzed and companies were assigned in three main groups based on the following scheme:



FIGURE 3-3 COMPANY GROUPING CRITERIA

As the figure illustrates above, the criteria for each group were based on the percentage of answers received in the category of organization sustainability. The evaluation was done by analyzing the questions measuring the social, economic and environmental sustainability of the company. As the main scope of the paper is environmental sustainability, it has been considered that questions measuring the latter should be given more worth in the evaluation process. But after carefully valuing this possibility, it was decided to value equally the three pillars of sustainability in the company grouping process, because the three pillars support each other.

Based on the findings in existing knowledge, a sustainable strategy has to include all three pillars of sustainability; therefore, this paper evaluates companies according to that standard. The pillars support each other; one should not exist without another. The evaluation of these responses will be detailed in Chapter 4. This general group of questions permits the researcher to analyze the correlations related to the professional background of the participants, which will provide interesting findings to the reader. Also, it supports future studies by providing a pre-evaluation of the results which can motivate future investigations in a more specific age group, country or company size. Furthermore, before closing the survey, it measures employee happiness with a simple yes or no question.

This survey required participants to be honest with themselves, by answering ethical questions which could have a disturbing effect on them. This was an important aspect in the design of this survey, since global issues of sustainability are and should be an uncomfortable topic to all of us. Therefore, this survey was especially hard for those individuals who do not have a pro-environmental mindset; indeed, it could have had a rather confronting effect on this specific individual, by raising his/her awareness on the raising sustainable issues we are facing and to the lack of personal contribution. As an addition, one of the main goals of this thesis is to raise awareness for global environmental issues, therefore if this survey had a positive effect on those

participants with a non-environmental mindset and were able to rethink their attitudes related to sustainability, this research was already worth it and it has contributed to fight environmental issues.

While the above detailed survey structure already introduced some information about the questions, this paragraph will provide a summary of the rather technical data of this survey. This survey consists of a total of 29 questions. It includes 7 of the 5-point Likert scale with several statements, 13 simple yes/no/little multiple choice-, 6 closed -, 2 short text answers- and 1 multiple choice questions. Please see Appendix 1 for more details. The survey was conducted online in Google Forms, within an active time frame of 6 months. The target sample size was 100 individuals, but eventually the actual response rate was 80. This slowed down the research process, since many requests were declined or left unnoticed. The main tool which helped to gather participants was the snowball effect, asking an individual to send the survey to a colleague, and so on. This survey received anonymous responses only, because some questions could have caused uncomfortable feelings to participants; therefore, it was a very important aspect that participants have no social pressure, so they are motivated to respond honestly. This was a condition to acquire reliable and valid results.

### **3.4.2 The idea behind micro interviews**

The results of this thesis are designed to serve as guidance for organizations on how to integrate environmental sustainability in the green strategy of the company. Additionally, it confirms that those pro-environmental organizations practicing sustainability at a high level, have happier employees which is a key for well performing and growing organizations. Employees are the main driver of a firm, so it is crucial how these individuals are guided and how well they are representing the values of the specific company. Therefore, the survey was investigating whether companies are educating employees through environmental training. Unfortunately, only 25% of the participants replied with a yes, which means that 75% of the employees working for different organizations did not. However, 26,6% out of those not receiving environmental training, showed interest in taking such a course. If companies would like to give a positive image about themselves in terms of having a sustainable mindset, before investing a great amount in marketing, first they should work on the attitude of their employees.

During the investigation process of this thesis, I have faced several incidents where the organization transmitted a highly sustainable image, which employees jeopardized in front of the public. One of the personal experiences I had, which motivated me to conduct the survey and micro interviews to investigate how well informed are employees related to sustainability was as

follows. I visited a highly sustainable facility LEED building, where it was explained how much waste and water they are recycling through the incredible design of the building. It was equipped with four trash cans, providing the opportunity to recycle paper, plastic and aluminum, organic and general waste, whereas other facilities usually provide two or three options for recycling waste. At one point of my visit, I wanted to throw out a cookie which fell on the floor, so I was standing in front of the trash cans analyzing which is the correct choice for my cookie. At that moment, an employee came to me and said, *“just throw it to any of them, they are all mixed anyway”*. This comment made me very sad and I felt, after being impressed with the high sustainable design of the facility that during the whole time of my visit they were giving me false impressions. To conclude this experience, it is very difficult to control waste in a public facility, but it was clear that this employee did not share the same values as the organization and created a bad reputation. Consequently, companies have to pay careful attention to the image their employees are standing for, because with such attitudes they are able to lose customers and receive negative reviews. This particular case has confirmed the opposite outcome as this research is hoping to achieve, which is a negative or neutral effect for the company behavior on employee attitudes.

At a very early stage of the planning phase of this paper, it became clear that still several individuals are not familiar with the concept of sustainability working in large organizations. The above detailed experience and the results of the survey have confirmed this statement as well. Therefore, in order to fill this gap, 6 simple micro interviews were conducted with individuals in influential positions, by asking the following simple question:

***“What sustainability means to you?”***

These individuals all lead a large group of people and have an important role within their respective organization. Therefore, the answers provide an understanding of how individuals in such roles represent their company’s sustainable strategy. The data gathered through the interviews were quantitative data and serve as supporting information for the main objective of this paper. The participants of the interviews had to fulfill the following requirements, in order to be eligible for this study:

- Top management or high influential position
- Working in a company with a green strategy

Some of the participants had to remain anonymous, due to the confidentiality of their role. The interviews will be introduced and evaluated in the upcoming chapter. The decision behind

the one question interviews with such a small sample size was to receive quality answers, to be able to extract only the relevant information which supports this study.

### 3.5 Data analysis methods

The survey was conducted through Google Forms. Once the desired number of answers were received, data was retrieved in an excel file. Before analyzing and transforming the dataset to the statistical program of Jamovi, it was checked for missing or faulty data. Some corrections were made, especially in those questions where custom answers were requested. After the excel file was corrected, the dataset was modified by re-coding answers to numbers. Question names were replaced by tags, which were designed to provide all the necessary information about the question in a brief and precise version. In order to get an understanding of the logic behind the line tags, see the following example:

#### 9\_EnS\_LimitPaper\_Ph2\_O

This tag refers to question number 9, which is the following: *“9. Are there policies, which are limiting the use of paper in your workplace (no printing, recycled paper etc.)?”* The second part “EnS” refers to Environmental Sustainability, since the question is related to that. The third section “LimitPaper” is a summary of the question. Fourth part “Ph2”, refers to Phase 2, as the question belongs to phase two. And finally, the “O” in the end relates to organization, since this particular question is measuring the environmental sustainability of an organization. The above seen name tags will help the work in the statistical program, by facilitating the analysis of the certain groups. So those questions marked by an “O” in the end, will be evaluated in the business behavior related analysis.

In the statistical program, nominal data was used for variables indicating for example geographic location or gender. Ordinal data was used for most of the questions, since the majority of them was a rating on a 5-point Likert scale. Continuous data type was used for the scale variables. To investigate the first hypothesis an exploratory factor analysis was run, whose results were further analyzed through a reliability analysis conducting a Cronbach Alpha test. Finally, a correlation analysis was made between the scores of the selected variables using Spearman’s Coefficient. To conduct further exploration of the dataset, statistical tests such as Mann Whitney U, Kruskal-Wallis or Pearson Coefficient were used, depending on the type of questions. This will be detailed in Chapter 4.

### **3.5.1 Sampling procedures**

In this paper, a non-probability sampling method was used, because of the exploratory characteristics of this research. Therefore, the method of snowball sampling was chosen to gather a sample population for this research. Two factors were motivating this decision. First, there was no sampling frame available. As a consequence, there was a lack of knowledge about the target population. It was considered that the main requirement for the individuals involved in the sampling process should be employed by a sustainable organization. In this research, age or gender were variables with low significance. The main thread was to find as many individuals as possible with the above-mentioned criteria. The snowball sampling method was considered to be the most efficient, since having the connection with several individuals working for a sustainable organization, has opened up the possibility of recruiting more participants from the same position. This was the main choice behind this method, since there was no direct connection between the target sample group. Yet, the results have shown that the survey was filled out by individuals with different corporate backgrounds.

### **3.6 Data validity and reliability**

For judging reliability, Cronbach's alpha coefficient was used in the statistical program of Jamovi. Although there are no agreed-upon terms or standards for qualitative research evaluation, it is crucial that all researchers utilize methods to raise the perceived legitimacy of their work when designing and carrying out their studies. Consequently, to increase the reliability and validity of the qualitative research of this paper, the technique of data triangulation was used. One interview was made in person, another through a phone call, whereas the others were conducted through email. Additionally, some participants formed part of both research processes (quantitative and qualitative). Details will be shared in Paragraph 4.5.

### **3.7 Conclusion**

The previously introduced methods were chosen, mainly because of the nature of the dataset. Quantitative research provided a large dataset, which was needed to reach the objective of this paper. Qualitative research would have served also the main purpose of this paper, however in order to gain useful data for this research, a case study with a large number of individuals from the same sustainable organization would have been suitable. In that case, a similarly structured interview would have been conducted with the participants as it was the survey of this paper. The possibility for choosing qualitative research as the main data gathering tool for this study

was valued in the planning phase of this research. Finally, a quantitative method was chosen, due to the lack of accessibility for such a sample group as it was described before. Also, this study required a large sample size; therefore, the evaluation of datasets with such dimensions were more transparent for the quantitative research method. Through qualitative research, different types of data can be gathered, which would have supported the research objective of this paper. Therefore, the micro interviews were added as a supportive method to solve the research problem.

## **4 RESULTS AND DISCUSSION**

### **4.1 Introduction**

After understanding the logical structure of this thesis, this chapter will introduce and discuss the major findings of the research that has been conducted. The format of this section is constructed by following the order of how the data was analyzed, with the intention of providing a better understanding for the reader. Initially, the research and discussion chapters were planned to be separated, but after carefully evaluating this option, it was decided to combine them, since the representation of the results are not always self-explanatory, especially the statistical data. Therefore, first, it will introduce the general findings, such as gender, age or experience level. As well, these variables are evaluated in Paragraph 4.5.3, analyzing further correlations related to these aspects. This section is followed by the results and discussion for the major qualitative findings of this paper. This serves as the basis for answering the research question of this paper. Consequently, it continues with the hypothesis testing, which confirms the results of the major findings. This will be followed by introducing other relevant correlations, which are supporting the main objective of the paper. Finally, quantitative findings will be introduced by discussing the results of the interview section.

### **4.2 Visual presentation of the general findings**

The data gathered for the findings of this paragraph, was collected through Phase 4 of the survey. All the questions included in this phase can be seen in Appendix 1. The variables are illustrated through pie charts, which were generated through the original program used for the survey, Google Forms. The charts are retrieved directly from the survey, representing the basic background information of the participants.

#### **1. Gender**

The pie chart below presents the gender distribution of the participants. As the results show, 80 responses were received overall. This question was designed as a non-optional question, so participants had to answer it in order to continue. Four answer possibilities were provided, by giving the opportunity to answer the question for those with different gender types. Yet, only two gender types participated in this survey. The results show that 36 female and 44 male individuals took part in this study; therefore, it is expected that gender should not be an influential factor related to employee attitudes. Based on existing findings, there was shown to be a weak

correlation between gender and sustainable behavior (Hines et al., 1968-1987 referred by Huffman et al. 2013). This hypothetical statement will be tested in Paragraph 4.5.3.

21. What is your gender?

80 responses

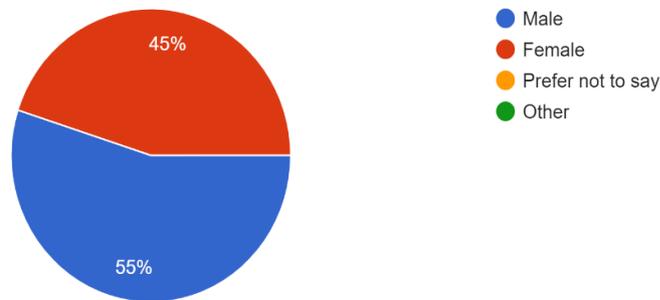


FIGURE 4-1 GENDER CHART - SURVEY

## 2. Age

The target population for this study was planned to be between 26-36 years and 36-45 years old. The reason behind is that individuals in this age group were the most accessible through the sampling process. Also, they are expected to be well educated regarding environmental sustainability. The answers were distributed between seven age groups, as Figure 4-2 illustrates above:

22. How old are you?

80 responses

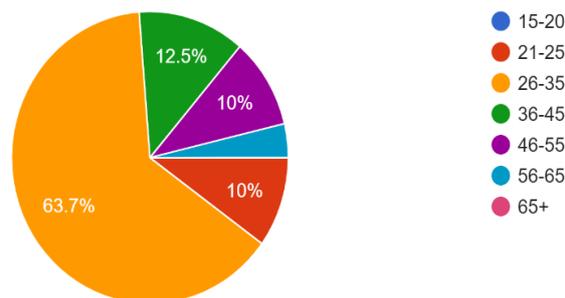


FIGURE 4-2 AGE CHART - SURVEY

This expectation was confirmed by the results, as more than half of the answers received were from individuals from the age group of 26-35 years. It was followed by 12.5% of participants between 36-45 years old. It was expected that by choosing the snowball sampling process,

answers outside of the target age group would be received as well. The remaining responses are divided between the age group of 21-25 and 56-65 years, with the minority of answers received by individuals of 56-65 years old. As expected, the first and the last age group was not selected, since most of the population belonging there are either students or retired.

### 3. Experience level

The third chart presented in this paragraph illustrates the professional experience level of the participants. The results show that there are two major groups between the participants. Individuals in associate and in mid-senior level positions are equally distributed. This is followed by participants from an entry level position. The fourth largest group was associated with individuals in a top management position, with an experience level of a director. A correlation of this variable and sustainable mindset was tested and will be presented in Paragraph 4.5.3, in order to investigate the relationship with existing knowledge found related to the importance of a sustainable managerial mindset (Yen and Yen, 2012). In this correlation the share of 2.5% of the individuals in executive positions will be included as well. Finally, some individuals participated in an internship job level in this survey as well.

23. What is your experience level in your current job?

80 responses

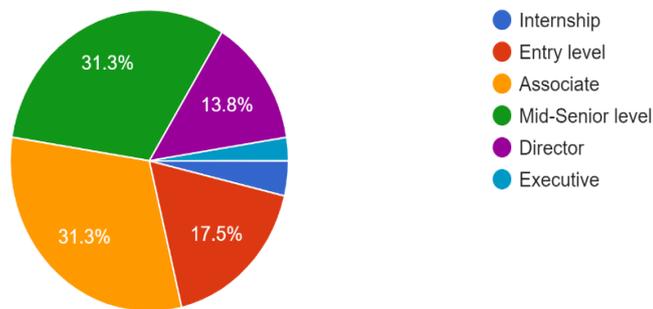


FIGURE 4-3 EXPERIENCE LEVEL CHART - SURVEY

### 4. Qualification

The following pie chart shows the shares of the educational background distribution of the participants. The majority of the answers were received by 37 individuals with a postgraduate background. This is followed by participants with a graduate degree. Three individuals among the participants received a doctorate degree. The least answers received are related to individuals

with college, high school and other educational backgrounds. These groups add a total of 10 individuals.

25. What is your highest qualification?  
80 responses

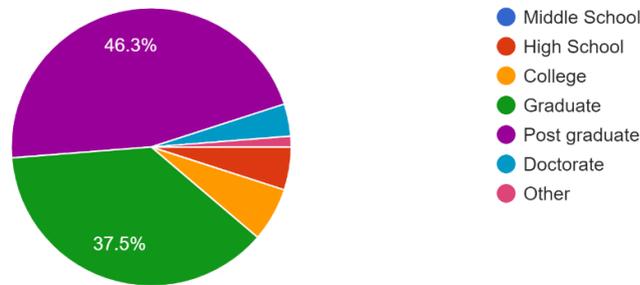


FIGURE 4-4 QUALIFICATION CHART - SURVEY

### 5. Company size

Figure 4-5 provides the background information regarding the size of the analyzed organizations. More than half of the participants are working for a large enterprise, with more than 250 employees. At the second place, both medium and small enterprises share an equal part from the overall assessment, which means that 16 employees are working for each category. Only 5 individuals come from a micro enterprise, where the number of employees is between 1 to 9.

27. What is the size of the company where you are working?  
80 responses

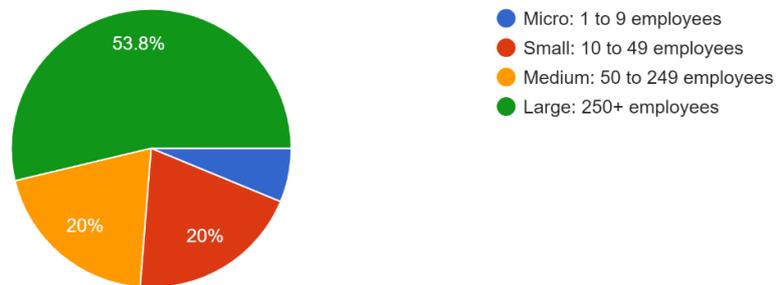


FIGURE 4-5 COMPANY SIZE CHART - SURVEY

A correlation analysis was conducted between these variables and the companies categorized based on their level of sustainability, in order to get a better understanding regarding the information found in previous studies, about the difficulties of introducing a green strategy within an

organization depending on the size of the company. This will be presented in Paragraph 4.5.3 as well.

### **4.3 Qualitative findings**

This paragraph includes the main, most important findings on which this study is based. The structure of the survey served as a guideline during the process of the result evaluation. As the main thread of this paper seeks whether there is a correlation between business behavior and employee attitudes, results have been analyzed according to the main sections of the survey. A factor analysis was run on the business behavior variables, following the logical order of the survey. This was followed by a reliability study using the Cronbach alpha method on the business behavior and employee attitude items. Finally, after retrieving the scores for each factor, a correlation analysis was run with the scores in order to analyze the relationship between the two main variables.

#### **4.3.1 Analysis of business behavior variables**

The survey was designed to measure the three aspects of sustainability, referred to as business behavior. As it was introduced previously, the data analyzing process has followed the particular structure of the survey. Therefore, since the two main variables of this study are considered to be business behavior and employee attitudes, the gathered dataset was evaluated according to the different phases. First, an Exploratory Factor Analysis (EFA) was run on the business behavior variables of Phase 2, analyzing the social and economic sustainable behavior of the enterprise. This method was chosen, to gain a better understanding about the factorial structure (=subdimensions) of the variables, by narrowing down to those which have the most significance in this study. Procedures encourage using exploratory factor analysis in situations where the researcher has no clear- or only vague expectations regarding the underlying structure of relationships (Fabrigar et al., 2012). In this case, since the variables of the two main aspects of sustainability were included, consequently these two major factors were expected, but the relationships between the two elements were unclear and a subject of this analysis. This expectation resulted to be false, since according to the program an additional third factor was discovered in analysis. Therefore, the exploratory factor analysis resulted to be a good choice. As Table 4-1 shows, the minimum residual method was used with varimax rotation. Results indicate that there is almost a clear separation between social and economic sustainability items. The variables with a factor loading score above 0.5 related to the first factor are all categorized in the

survey as economic sustainability measurements. The second factor collected only social sustainable items, whereas the third factor has variables from both categories.

**Table 4-1**

**Exploratory Factor Analysis – Social and Economic Business Behavior**

Factor Loadings

	Factor			Uniqueness
	1	2	3	
Waste management	0.672		0.360	0.410
Product lifecycle	0.671			0.461
Purchasing local products	0.611	0.338		0.511
Support of external RDI	0.573			0.583
Follow UN Sustainable Development Goals	0.562	0.330		0.546
Collaboration with local businesses	0.546	0.340		0.586
Following ISO Plan	0.525		0.513	0.395
Available mental help	0.482	0.358		0.629
Health control	0.481			0.681
Paid extra hours	0.426			0.723
Most important department is RDI	0.423			0.769
Work safety equipment	0.371			0.834
Free food at work				0.906
Flexible holidays		0.741		0.427
Flexible lunch break		0.674		0.510
Flexibility of work hours		0.554		0.628
Free coffee and water provided at work		0.519		0.720
Possibility for home office		0.492	0.331	0.647
Adequate salary		0.479		0.668
Long term strategic plan			0.805	0.249
Investment in innovation			0.680	0.479
Feeling safe at work			0.558	0.622

## Factor Loadings

	Factor			Uniqueness
	1	2	3	
No corruption			0.525	0.650
Supporting non-profit organizations	0.317	0.348	0.441	0.584
Received work security training			0.340	0.815

In order to get a better understanding about the correlation between the variables of the factors, Cronbach Alpha was run separately on each group. These values are shown in the following table:

**Table 4-2****Reliability Analysis – Social and Economic Business Behavior**

## Scale Reliability Statistics - Overall (Factor 1, 2, 3)

	Cronbach's $\alpha$
scale	0.885
Factor Group 1, Economic Sustainability	
	Cronbach's $\alpha$
scale	0.857
Factor Group 2, Social Sustainability	
	Cronbach's $\alpha$
scale	0.840
Factor Group 3, Mixed Social and Economic Sustainability	
	Cronbach's $\alpha$
scale	0.806

The values in the table show that each factor separately indicates a significantly high reliability of the scores, since each of them resulted to have an Alpha Cronbach value over 0.8. Since the logic behind the last factor was not clear, it also indicates the lowest alpha value, therefore the first value was considered as the significant one in the reliability analytics of the business behavior variables measuring the economic and social sustainability of the studied organizations.

To complete the first phase of this analytical section, this paragraph illustrates the results of the environmental business behavior items. Two major observations have been made related to the analysis of the dataset of environmental sustainability within the organization. First, the questions in the survey measuring these items were simple multiple-choice and closed questions,

whereas those in survey phase 2, were exclusively 5-point Likert scale designs. The survey includes only one multiple choice question, which includes one answer indicating that the other possibilities were not chosen. Eventually, there were few answers in this category, which resulted in negative values in the dataset. This question was missed from the EFA, because the other answers of this question indicate the important information related to this variable. Questions can be found in Appendix 1, to get a better understanding about its structure. The other reason was to follow the logical structure of the survey. In this phase, significantly less questions were included measuring only the environmental sustainability of the enterprise. Also, survey phase 3 contains the measurements for the individual's personal level sustainability. The reason behind this decision was that the main part of the survey – phase 4 - will eventually answer the questions related to the individuals' environmental sustainability. If there is a positive outcome, meaning that participants have an environmentally positive mindset because of their work environment, the answer for the individual's and the organization's level of environmental sustainability will be given by itself. This will be discussed further in this chapter. As the results show in Table 4-3, there are two major factors in this analysis:

**Table 4-3****Exploratory Factor Analysis – Environmental Business Behavior**

Factor Loadings

	Factor		Uniqueness
	1	2	
Recycling at work		0.358	0.872
Employer support sustainable transport		0.385	0.848
Limited paper use at work		0.626	0.601
Environmental training received		0.753	0.428
Reusable drinking cups available	0.498		0.747
Microwave available	0.645		0.574
Cutlery available	0.732		0.452
Coffee machine available	0.583		0.658

In this case, the evaluation of the factors is absolutely clear. It is highly probable that the generation of these factors are due to the different design of the question, which resulted in different dataset. Factor 1 includes all the items related to question number 6, which is the only question with multiple selection possibilities and variables representing the possible answers for the particular question. These questions are related to the environmentally friendly eating and drinking possibilities at the workplace. Whereas factor 2 groups the remaining questions from the category, refers to pro environmental actions and policies of the employer. Therefore, this factorial selection was clear. In this analysis the same minimal residual extraction method was used and varimax rotation.

In order to retrieve accurate results, the coding of some questions in this section were done differently. Questions 7 – 8 – 9 – 10 had one factor in common, a third answer possibility apart from “Yes/No”, which is “No, but I would like it” and “No, but I am doing it individually”. These answers meant to measure the interest and desire of the individual for sustainability within the organization. But when it came to measuring the sustainability of the organization – for which these questions were actually designed – only two categories can be taken into consideration: “Yes” and “No”. The organization is either practicing the respective environmentally sustainable

behavior or it does not. Consequently, answers of “*No, but I would like it*” and “*No, but I am doing it individually*” are considered as “**No**”. Therefore, the dataset was coded as the following for these particular questions, so the data could be evaluated correctly. This procedure is demonstrated in the following table:

**Table 4-4 Coding Example**

Version based on original question design	Version used in during the statistical analysis
0 = <i>No</i>	0 = <i>No</i>
1 = <i>Yes</i>	1 = <i>Yes</i>
2 = “ <i>No, but I would like it</i> ” or “ <i>No, but I am doing it individually</i> ”	0 = “ <i>No, but I would like it</i> ” or “ <i>No, but I am doing it individually</i> ”

Consequently, to control the reliability of these results following the same analytical structure as before, a Cronbach Alpha reliability analysis was run on each factor and on all variables in the group. The following table indicates the results:

**Table 4-5**

**Reliability Analysis – Environmental Business Behavior**

Overall (Factor 1, 2)	
	<b>Cronbach's <math>\alpha</math></b>
scale	<b>0.730</b>
Environmental Sus., Eating-drinking possibilities provided	
	<b>Cronbach's <math>\alpha</math></b>
scale	0.727
Environmental Sus., Pro-environmental actions and policies	
	<b>Cronbach's <math>\alpha</math></b>
scale	0.665

The tests were repeated on each factor group and the overall items. Given the fact that the factors separated, but the variables are complementing each other, the value of the analysis on all significant environmental business behavior items were used as the indicative score, which resulted in a moderate value. The other two factors are slightly lower, but it could be accepted in an early stage of the research according to the index suggested by Hair et al. (2010) referred

by Howard 2018. The other two scores based on the separate factor loadings were not taken into account, since in the EFA the factors separation was clear.

#### **4.3.2 Analysis on employee attitudes variables**

The evaluation of the dataset continues with the analysis on the employee attitude items. First, an exploratory factor analysis was run on variables included in survey Phase 4, however question number 14 was excluded from the analytics due to the nominal structure of the variable. This issue for this item was not considered in the planning phase, therefore it was not evaluated along with the rest of the ordinal dataset. The factor analysis in this case did not provide a clear factor loading as before, since similar items are appearing in factor 1 and 2 equally. As table 4-6 illustrates the findings, there are some items in factor loading 2, which negatively correlate with the dataset. In phase 4, some items had reversed meaning, therefore they have to be reversed.

**Table 4-6 Exploratory Factor Analysis – Employee Attitudes**

Factor Loadings

	Factor		Uniqueness
	1	2	
Recycling at home because of job			0.915
Using sustainable transportation because of job	0.317		0.890
Job influences lifestyle	0.306	0.311	0.810
Conscious consumption habits because work			0.907
Conscious colleagues at work	0.572		0.661
Harder to build relationships when not being conscious	0.435		0.791
<b>Contribution to green strategy makes no sense</b>			0.974
Job good influence	0.443	0.328	0.697
Not aware of sustainability before job	0.568	0.477	0.450
Learned to recycle because job	0.559	0.447	0.488
Colleagues influence positively consumption habits	0.783	0.317	0.286
Organization raised environmental consciousness	0.791	0.340	0.258
I raise consciousness of others, because of my job	0.613		0.620
Purchase of local, seasonal products, because job	0.675		0.508
Job motivated to research sustainability	0.654		0.563
<b>I was environmentally conscious before job</b>		<b>-0.638</b>	0.538
<b>Job had no influence on recycling habits</b>		<b>-0.801</b>	0.312
<b>Job had no influence on consumption habits</b>		<b>-0.749</b>	0.382

A second exploratory factor analysis was run excluding the above highlighted four items with reversed understanding. These items, appear as the following in the survey:

**Table 4-7 Reversed Statements of Question 20**

<b>Contribution to green strategy makes no sense:</b> Question 19 - Do you feel that your contribution to the green strategy of your company doesn't make sense at all? (Yes/No)
<b>I was environmentally conscious before job:</b> Question 20 - I was already environmentally conscious, before I started working at my current job. (5-point Likert scale)
<b>Job had no influence on recycling habits:</b> Question 20 - My current workplace had no influence on my recycling habits. (5-point Likert scale)
<b>Job had no influence on consumption habits:</b> Question 20 - My current workplace had no influence on my consumption habits. (5-point Likert scale)

The results have confirmed the expectation that only one factor will appear, which means that there is only one dominant mechanism in the sample population, which is the business behavior influence on employee attitudes. This factor collects the variables of employee attitudes. The table below shows the analysis conducted without the reversed elements:

**Table 4-8 Exploratory Factor Analysis – Employee Attitudes**

Factor Loadings	Factor	
	1	Uniqueness
Recycling at home because of job		0.925
Using sustainable transportation because of job	0.331	0.890
Job influences lifestyle	0.402	0.839
Conscious consumption habits because work	0.310	0.904
Conscious colleagues at work	0.559	0.688
Harder to build relationships when not being conscious	0.336	0.887
Job good influence	0.515	0.734
Not aware of sustainability before job	0.734	0.462
Learned to recycle because job	0.693	0.520
Colleagues influence positively consumption habits	0.850	0.278
Organization raised environmental consciousness	0.876	0.233
I raise consciousness of others, because of my job	0.584	0.659
Purchase of local, seasonal products, because job	0.690	0.524
Job motivated to research sustainability	0.631	0.602

Following the analytical scheme in the previous paragraph based on the exploratory factor analysis, a reliability analysis was conducted using the Cronbach's Alpha method. Regarding these items, there were no subdimensions analyzed, since the strong factor loading. All employee attitude items were analyzed and the items highlighted in Table 4-8 above were reversed. The following table indicates the results, with a significantly high alpha value, which is considered that the conducted survey on analyzing the influence of business behavior on employee attitudes was reliable.

**Table 4-9 Reliability Analysis – Employee Attitudes**

Scale Reliability Statistics

Cronbach's $\alpha$	
scale	0.873

	If item dropped
	Cronbach's $\alpha$
Recycling at home because of job	0.874
Using sustainable transportation because of job	0.872
Job influences lifestyle	0.869
Conscious consumption habits because job	0.873
Conscious colleagues at work	0.865
Harder to build relationships when not being conscious	0.873
Contribution to green strategy makes no sense	0.875
Job good influence	0.865
Not aware of sustainability before job	0.857
Learned to recycle because job	0.860
Colleagues influence positively consumption habits	0.852
organization raised environmental consciousness	0.851
I raise consciousness of others, because of my job	0.867
Purchase of local, seasonal products, because job	0.860
Job motivated to research sustainability	0.864
I was environmentally conscious before job	0.879
Job had no influence on recycling habits	0.863
Job had no influence on consumption habits	0.863

The results of the above analyzed dataset are considered as the major confirmation for the study being realistic and reliable. These steps were crucial in order to follow the data analytical process and to retrieve correct results.

### 4.3.3 Main hypothesis testing – Score analysis between employee attitudes and business behavior

After the main elements of the dataset were confirmed to be reliable, the sum scores of the business behavior and employee attitude variables were retrieved. With these scores, a correlation matrix was run, using the spearman coefficient. The results of this correlation analysis will determine the outcome of this research. Spearman correlation was chosen, because the used dataset's measure type is ordinal and data type used is integer. The following plot chart illustrates the nature of the results as well:

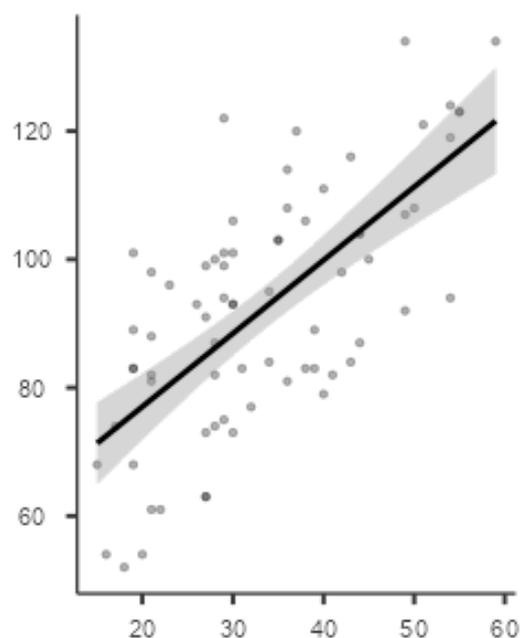


FIGURE 4-6 PLOT CHART – MAIN HYPOTHESIS TESTING

In this test, the sum of all variables of business behavior – environmental, social and economic - were included. The variables were analyzed separately and the correlation was controlled between each factor. However, the results indicated a similar relationship as the table represents above. Therefore, the introduced results are considered to be indicative. The value of the Spearman's rho coefficient indicates, there is a moderate correlation between employee attitude and business behavior items, according to the correlation coefficient index, since the value of **0.641** is between the range of 0.40-0.69. To conclude, the results suggest that business behavior does have a moderate effect on employee behavior, yet it is not significant. The

P-value (probability) obtained from this test shows that the probability is less than 0.001 that the above observed correlation is due to chance.

Conclusively, the probability for the created null hypothesis being wrong and to be rejected is very high. Therefore, alternative hypotheses (H<sub>1</sub>) should be accepted. This statement refers to the main hypothesis of this paper, which was introduced in detail in Paragraph 3.3. As the results suggested, null hypothesis was rejected and the following alternative hypothesis was accepted:

***H1. - An environmentally sustainable work environment has a positive influence on employees.***

After retrieving these results, the main research question of this study can be answered, which was defined as the following:

*Is an environmentally sustainable work environment able to influence employees in a positive way?*

**Consequently, the answer is yes, an environmentally sustainable work environment does have an effect on employee attitudes in a moderate positive way.** This statement was the main goal of this paper, which proves the importance of the sustainable behavior of businesses. However, results show that the two variables are related with a medium level correlation, whereafter it can be also concluded that it is rather heterogeneous how the behavior of employees changed.

#### **4.3.4 Supportive research question and hypothesis testing**

In this paper, a supporting research question was defined, in order to investigate whether employee's had a pro environmental mindset before working in a particular organization. The answer for this question indicated the following relationship:

*Do enterprises with sustainable strategies attract employees with a pro-environmental mindset?*

To answer this question, a direct question was designed in the survey to provide clear results for this variable. It is important to mention that this question was not included in any of the statistical analytics conducted before. The following chart illustrates the results retrieved directly from the survey:

5. Were you motivated to apply to your current job because of its sustainability and environmental consciousness?

80 responses

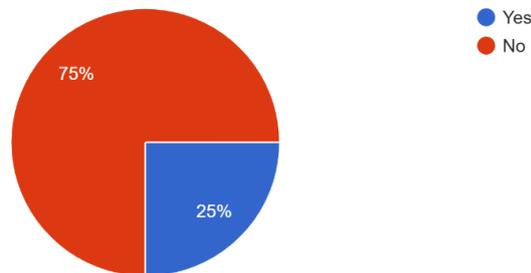


FIGURE 4-7 RESEARCH QUESTION 2 - CHART

This chart clearly shows that the majority – 75% - of the participants were not motivated to apply to their current job because of its sustainable mindset. For this particular research question, a null hypothesis was stated as the following:

***H0: - Enterprises with sustainable strategies do not attract employees with a pro-environmental mindset.***

Whereas the alternative hypothesis in this scenario, sounds like this:

***H1: - Enterprises with sustainable strategies attract employees with a pro-environmental mindset.***

Results confirmed that the null hypothesis is true, which means that the majority of the participants were not motivated to apply for the specific job because of the company's sustainability. Therefore, the alternative hypothesis for research question number two has been rejected. These results can be interpreted, by understanding the group of participants answering negatively, as individuals without a pro-environmental mindset. However, it must be stated that another implication can be true to this statement, which is simply that this aspect was not a significant one in the job seeking process of the individuals. This is a question of future research. These results are additional information for the main research topic. The variables in this case were not analyzed statistically, due to the clarity of the results retrieved from the survey question.

## **4.4 Further correlations of important findings**

Previous paragraphs introduced the results of the core finding of this research. This paragraph will introduce additional findings. First, the relationship between survey question 1 and 29 will be discovered. This will be followed by the exploration of the findings related to the dataset gathered through general data.

### **4.4.1 Relationship between awareness and influence control questions**

The first and last question of the survey was designed with the intention of measuring the actual awareness participants had on the sustainable behavior of their employer. As it was detailed previously in Paragraph 3.4.1, the two questions are exactly the same, with a small explanation of each factor – social, economic, environmental. Therefore, the first question aims to investigate the individual's knowledge and awareness before going through on the survey questions and getting a deeper insight in sustainability related questions. Whereas the last question, measures the actual knowledge regarding the level of social, economic and environmental business behavior in the enterprise. The idea behind this concept is that after filling out a survey the answers might change in correlation to the actual experience of the individual. The majority of the questions are statements measured in a 5-point Likert scale, which helped participants to evaluate their own situation within the enterprise, as well as the particular organizations. With these questions two main aspects were measured. The first, is the correlation between the first and the last question, to see whether the survey had an actual influence on the opinions provided in the first question.

To investigate the differences between question 1 and 29, a Paired Samples T-Test was run between the factors of each category, using the Wilcoxon ranking method. This method was chosen, because it helps to measure the results of two different time points for the same question. This method matches the requirements of these particular questions. Since three sustainability factors were measured, social, environmental and economic, the tests were conducted according to that. To each factor a null and an alternative hypothesis was created. First the social factor was tested, where results suggest the following:

**Table 4-10****Paired T-Test – Wilcoxon Ranking Q1-Q29 Social Sustainability**

			Statistic	p
Q1 - SocialS	Q29 - SocialS	Wilcoxon W	186 <sup>a</sup>	0.863

*Note.*  $H_a \mu_{\text{Measure 1}} - \mu_{\text{Measure 2}} < 0$

The table above indicates that there is an insignificant difference between the two items with a **p-value of < .863**. Therefore, null hypothesis was retained, however the survey had no significant effect on the awareness of the participants regarding social business behavior. The high value shows that the two results are close to each other. This statement was confirmed through summarizing the scores in the Excel datafile, which indicated that the overall score for Q1 was 307 and for Q29 only 300 in the category of social sustainability.

The same conclusion can be drawn for the environmental business behavior awareness control questions, which is displayed in the table below:

**Table 4-11****Paired T-Test – Wilcoxon Ranking Q1-Q29 Environmental Sustainability****Paired Samples T-Test**

			Statistic	p
Q1 - EnvironmentalS	Q 29 - EnvironmentalS	Wilcoxon W	288 <sup>a</sup>	0.994

*Note.*  $H_a \mu_{\text{Measure 1}} - \mu_{\text{Measure 2}} < 0$

Alternative hypothesis was not supported, since results indicated a relatively high p-value. On the other hand, answers in this category differed slightly more than in the previous factor, yet the difference is considered to be still quite low, not significant. The variance between the scores indicate that Q1 has received 290, whereas Q29 significantly less, 260 scores overall. The results indicated that this factor experienced the highest drop in comparison to the others.

For the final factor, null hypothesis was retained as before, since results indicated the following p-value:

#### Table 4-12

#### Paired T-Test – Wilcoxon Ranking Q1-Q29 Economic Sustainability

##### Paired Samples T-Test

			Statistic	p
1_ACQ_EconomicS	29_ICQ_EconomicS	Wilcoxon W	125 <sup>a</sup>	0.899

Note.  $H_a \mu_{\text{Measure 1}} - \mu_{\text{Measure 2}} < 0$

This indicates that the survey had no significant influence on the participants' awareness regarding the economic business behavior of the organization. In this case results of Q1 is 306 and for Q29 is 298, which demonstrates an insignificant difference.

To visualize the previously explained results, the following two charts were retrieved directly from the survey:

1. On a scale of 1-5 please rate, how important are the following aspects for the company where you are working, where 1 is not important and 5 is very important:

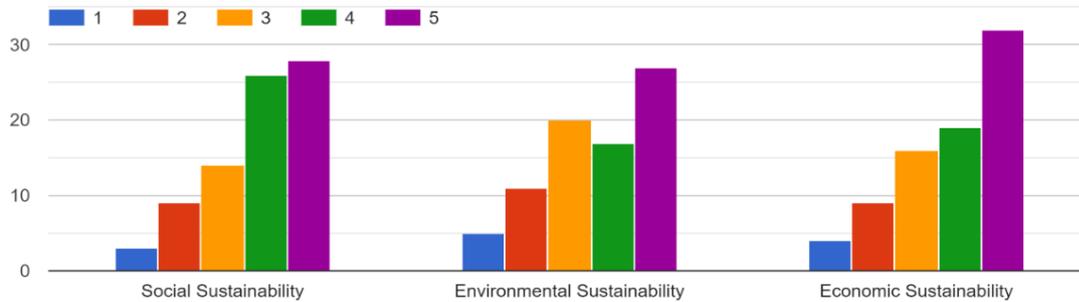


FIGURE 4-8 CHART Q1

29. Remember, that in the beginning of the questionnaire you were asked to rate your company regarding its level of sustainability. Now, that you ...ng, where 1 is not important and 5 is very important:

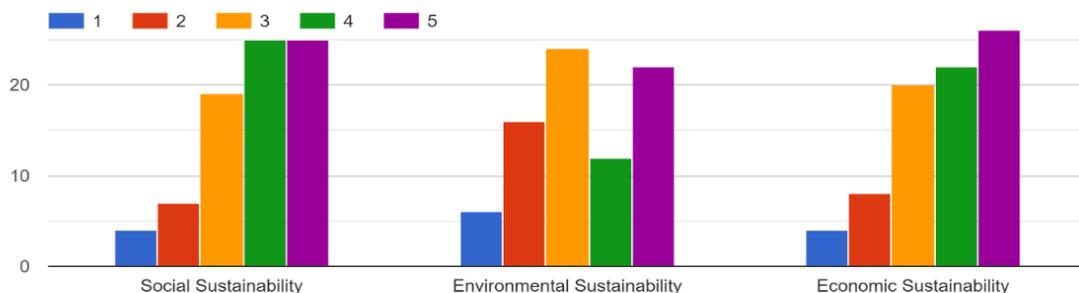


FIGURE 4-9 CHART Q29

The two charts above confirm the results of the correlation analysis conducted, since it visualizes the differences between the two questions in each factor, indicating that the survey had the most difference in environmental-, then social- and the least in economic awareness of business behavior.

Additionally, a Paired T-test was conducted using the same method in order to compare which time point of the two-answer groups (Q1 and Q29) has higher values. Results indicate that the

first question, which intended to measure the awareness of participants on business behavior, had slightly higher results as the last question (Q29), with a mean of 11.3. Whereas the influence control question was measured to have a mean of 10.8. This suggests that individuals after filling out the survey had overall a lower perception of sustainable business behavior. The reliability of these results was confirmed through the excel dataset, which indicated an overall score for Q1 of 903 and an overall score for Q29 of 866. Results of the T-test indicated, that the difference is significantly low, as it appears in the table below.

**Table 4-13 Paired T-Test – Wilcoxon Ranking Q1-Q29 Sum-Score**

Paired Samples T-Test			Statistic	p
Sum Score - Question 1	Sum Score - Question 29	Wilcoxon W	388 <sup>a</sup>	0.942

Note.  $H_a \mu_{\text{Measure 1}} - \mu_{\text{Measure 2}} < 0$

Conclusively the p-value of the suggested hypothesis of  $Q1 < Q29$  had a result of 0.942, which confirms the results and retains the null hypothesis, as the survey influenced slightly “negatively” the awareness of employees regarding business behavior. These results do not indicate actual negative results, rather it suggests that employees have slightly overrated their employers in terms of business behavior. Also, this claims that results for Q29 were more realistic results, as it was initially expected, however the existing differences are undetectably small.

#### 4.4.2 Correlations of general findings

This section will introduce those findings which support the overall image of this research. Variables were linked with the general data retrieved from the survey. The main groups analyzed are related to experience level, gender, company size, geographic location and the analysis of the companies' background information.

##### 1. Experience level – Environmentally Sustainable Mindset of Participants

As previous research suggested, if top management has a pro-environmental mindset and is able to integrate it into the company's strategy, the rate of success for having an effect on the employees is much higher. Consequently, this test investigates whether an individual in a higher position has a more sustainable mindset. A Kruskal-Wallis test was conducted, since each group has more than two variables. Therefore, a null and an alternative hypothesis was stated:

**H0: An individual's environmentally sustainable mindset does not depend on the job experience level.**

**H1: An individual's environmentally sustainable mindset is higher according to the job experience level.**

As the chart below illustrates, there is a high p-value, which suggests rejecting the alternative hypothesis (H1), since it is higher than the typical significance level (0.05). Therefore, in this paper participants in higher positions do not tend to have a more sustainable mindset than others.

**Table 4-14 Experience Level – Environmental Mindset**

Kruskal-Wallis				
	$\chi^2$	df	p	$\epsilon^2$
Sum Score – Environmentally Sustainable Mindset and Experience Level	7.11	5	0.212	0.0901

In this study, the vast majority of the participants are in associate and mid-senior level positions, conclusively a further investigation is suggested in this topic with a sample group including more individuals from higher positions.

## **2. Gender – Environmentally Sustainable Mindset of Participants**

As it was already introduced, the majority of the participants were male, in a 55-45% ratio. Additionally, the survey was designed to measure an individual's environmental sustainability. Therefore, it was a logical choice to explore the relationship between gender and an individuals' pro-environmental mindset. A Mann-Whitney U test was conducted, to analyze the relationship between the two variables. As the relatively high p-value in table indicates below, null hypothesis was rejected. Therefore, results conclude that there is no significant relationship between gender and sustainable behavior of an individual. This research concluded the same results as Huffmann and Klein in their research conducted in 2013, which had the similar outcomes related to the same variables.

**Table 4-15 Gender – Environmental Mindset**

<b>Independent Samples T-Test</b>				
		<b>Statistic</b>	<b>p</b>	<b>Mean difference</b>
Individual's sustainability - Gender	Mann-Whitney U	728	0.269	1.000

### **3. Company Size – Business Behavior**

Existing knowledge suggested that in smaller organizations it is harder to implement a sustainable strategy. As it was detailed in Paragraph 4.2, 53.8% of the participants are working for a large organization. Therefore, this investigation will contribute to this statement in the context of this research. A Kruskal-Wallis test was conducted, which has accepted the null hypothesis, as the level of sustainability is not higher in larger organizations. The results reflect a p-value of 0.227, consequently the alternative hypothesis, the following statement was rejected. To conclude, based on the results of this research, larger organizations do not tend to behave more sustainably than medium-, small- or micro-organizations.

### **4. Company Grouping Analysis**

The data gathered about the names of the organizations in the survey was not used publicly, since for that the permission of each company would have been necessary. Also, some participants work in confidential positions. Therefore, in order to use the data fruitfully, as it was detailed in Paragraph 3.4.1, the companies were distributed into three main groups based on the level of sustainability (business behavior) of the organization. In this paragraph, the relevant explorations related to this factor will be displayed. The following chart illustrates the distribution of the three categories among the companies:

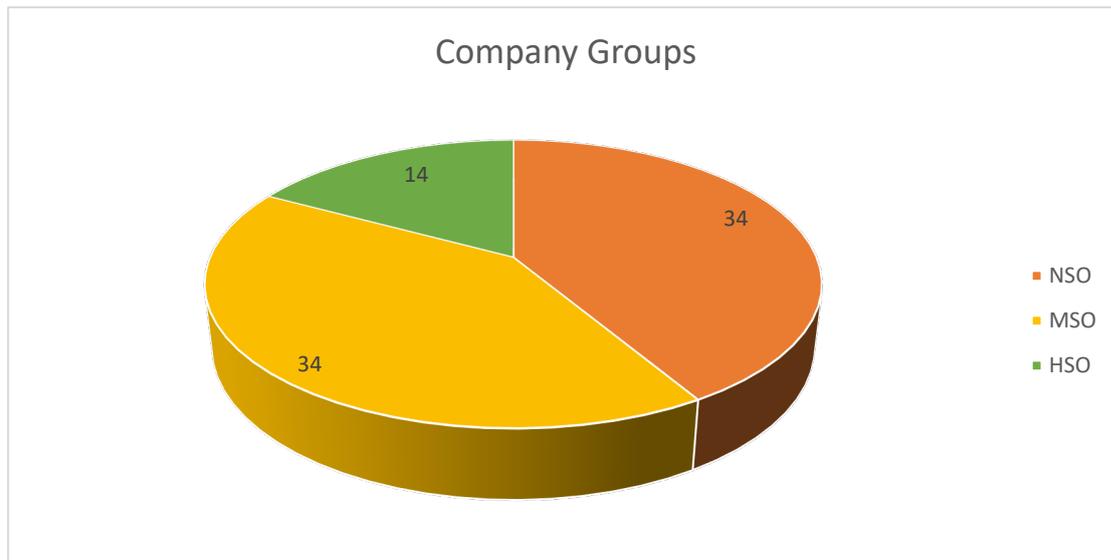


FIGURE 4-10 COMPANY GROUP CHART

According to the criteria set for grouping the companies in three major groups based on the level of sustainability within the organization, it reflects that 42% of the participating companies are considered as an NHO (Non-Sustainable Organization), 42% is in the process of shifting into a more sustainable direction – referred as MSO's (Moderately Sustainable Organization). Finally, 17% of these organizations resulted to be highly sustainable (HSO).

To confirm the correlation between the company groups and the business behavior variables of the dataset, a Spearman Correlation Analysis was conducted. The results of the test have confirmed that there is a high correlation, with a **Spearman's rho value of 0.850** and a **p-value of <.001**, which serves as a confirmation of a successful company grouping process.

##### 5. Geographic location – Company groups

This paragraph concludes the results related to the geographic locations of the participants. First, the chart will illustrate all the countries which were participating in this survey:

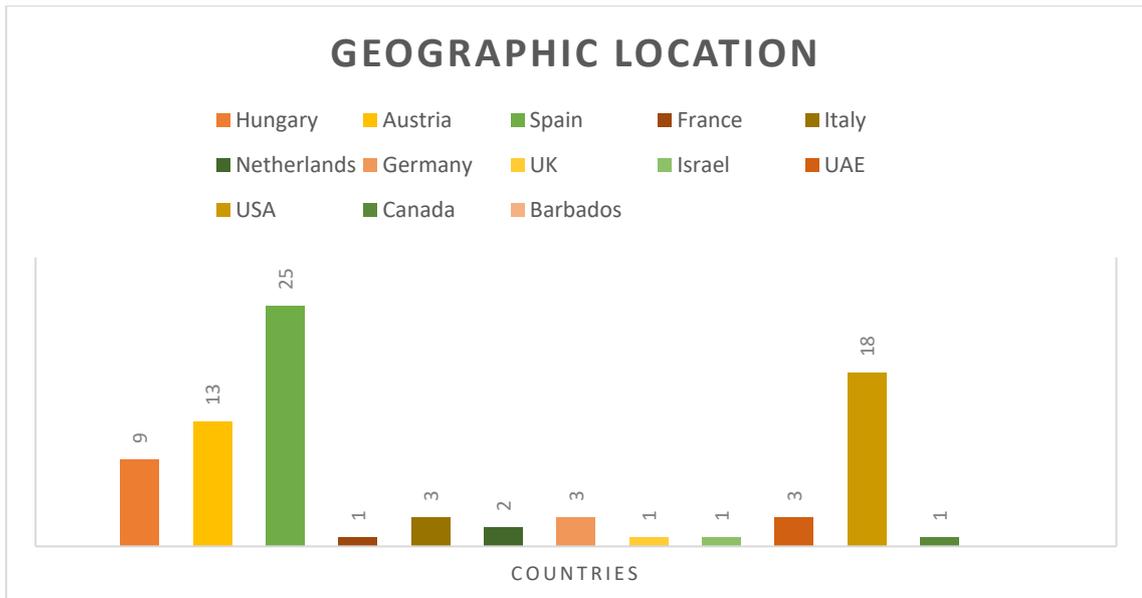


FIGURE 4-21 GEOGRAPHIC LOCATION (COUNTRIES)

The chart above illustrates clearly the geographic background of the participants. Answers were received from 12 countries, located in 3 continents. The results related to Asia are not significant due to the small sample size. A Kruskal-Wallis test was conducted on the variables of geographic location and business groups, which resulted in a p-value of 0.177, which is higher than the significant level. Therefore, it concluded that the null hypothesis should be accepted, which relates to the fact that there is no significant relationship between highly sustainable, slightly sustainable and non-sustainable companies and geographic location.

Additionally, to continue the exploration of the results, countries were grouped into three continents and the correlation was investigated between the geographic location and the level of business behavior. First, the following analysis provides an understanding about the level of sustainable behavior in each particular continent. In this analysis data was elaborated in Excel, which allowed the following presentation:



FIGURE 4-32 GEOGRAPHIC LOCATION (CONTINENTS) – COMPANY GROUPS

The chart above illustrates based on the company grouping analysis that the average of the participant companies from Europe belong to the category of MSO's. The same is true for the companies in North America. On the other hand, the average of the participants from Asia belongs to the category of NSO. This information suggests that the majority of companies in Europe and North America are in the transition to being more sustainable.

### 6. Business behavior – Employee happiness

As the final exploration of this paper, the relationship between business behavior and employee satisfaction was analyzed. A Mann Whitney U test was conducted to investigate this relationship. As the results indicate in the following table, the low P-value suggests rejecting the null hypothesis, which would have confirmed that there is no relationship between sustainable enterprises and employee happiness.

**Table 4-16 Business Behavior – Employee Happiness**

#### Independent Samples T-Test

		Statistic	p
Sum Score – Business Behavior	and Employee Happiness	Mann-Whitney U	162 < .001

Consequently, results indicate that there is a positive relationship between the statement; therefore, the alternative hypothesis was accepted: Employees are more satisfied in

organizations with higher levels of sustainability. As existing research suggests as well, companies that practice environmental responsibility are seen by workers as more desirable employers. These results demonstrate that integrating sustainability into one's fundamental business offer may benefit not only the environment but also the employee's social wellbeing.

#### 4.5 Quantitative findings - Interviews

The conducted micro interviews are additional output for the main findings of this paper. As it was introduced in Paragraph 3.4.2, the interviews were conducted with professionals, fulfilling the two criteria of being a top manager or working in an influential position in a company with a sustainable strategy. The sample size for this research included 10 people, with a response rate of 60%. The results were evaluated according to three main criteria, which were considered to be crucial in the interpretation of the answers. Additionally, a rating system was designed, which allows the interviews to be ranked and helps to interpret the relationship between quantitative and qualitative research. A summary of the detailed criteria is summarized in the following table:

**Table 4-17 Interview Ranking Criteria**

Criteria	Explanation	Score
Awareness / Relevance	Deep understanding of the topic of sustainability	1-3
Coherence / Structure	Logical connection between the proposed arguments	1-3
Uniqueness	Contribution with own, personal point of view to the topic	1-3

The above presented three criteria were chosen as the main evaluation aspects of the qualitative research, because it targets the expected contribution factors to this research. The first criteria, awareness, was a highly important factor for data reliability and for the context of this paper. Since the main criteria in the sample selection process was to conduct the interview with individuals from sustainable organizations, a high understanding of the subject was expected from participants. **Coherence** was set as an analytical factor, because it serves as an indicator for the logical connections in the answers. A highly coherent answer is well structured and easy to read, which is not just an important factor in the evaluation process of the answers, but individuals in such positions must be able to provide clear and precise arguments in order to

transmit the strategy or ideas to their audience. The last factor was decided to be **uniqueness**, since these interviews are partially investigating the mentality of individuals in such positions, therefore it was inevitable to receive their own ideas and to get the sense of one's personal commitment to sustainability.

The following table provides an overview on the background and geographic location of the participants:

**Table 4-18 Interview – Participant Background Information**

Interview No.	Position	Field	Location
1	Managing Director	Environmental	Hungary
2	Press Officer	European Affairs, Communications	Spain
3	Officer	International Financial Organization	USA
4	Sales Team Lead	Multinational IT Organization	Hungary
5	Professor, Officer	Human Rights Organization, Business	Germany, Spain
6	CEO, Founder	Gastronomy, Education, Health, Sports	Austria

Some participants formed part of the quantitative research process as well, which made the bond between the two types of research sections stronger. Professionals have different backgrounds in several industries, which the answers reflected as well. The complete interview can be found in Appendix 2, which is highly recommended to read, in order to understand the following evaluation and summary:

**Table 4-19 Interview Evaluation**

No.	Summary	Evaluation		
		A	C	U
1	This answer provided the most insight in the integration of sustainability the company's strategy. As a company operating in the field of environmental protection and remediation, it is crucial for management to have a standpoint like this and transmit these values to all stakeholders. This answer reflects a deep understanding of the functioning of sustainability; therefore, it was rewarded with the highest score in the awareness category. The arguments were	3	3	3

	clearly related to the internal fight for environmental issues as well as the cause-effects statements, Consequently, it received the highest score for the criteria coherence. The answer's uniqueness was also rewarded with the maximum score, due to the shared details of the working processes. This answer reflected the opinion of a managing director.			
2	This statement highlights a personal view about the important factors of sustainability and how it should be handled. The understanding of the topic is clear; therefore, it has received the maximum score. It touches the pillars of sustainability, by providing grounding arguments about how to handle them. This writing reflects that it comes from a journalist, due to the brief and precise summary of the answer. Therefore, coherence was also rewarded with the highest score. Regarding uniqueness, since a relatively personal opinion was shared, it was graded again with the highest score. A mindset like this is crucial in such fields as journalism, where it is inevitable to integrate a personal opinion in the published work, which will be shared with an enormous audience.	3	3	3
3	This answer reflected the highest level of awareness, through a detailed and precise explanation about a personal opinion of sustainability, with clear arguments and possible solutions. Consequently, both for awareness and coherence it was rewarded with the highest scores. This particular statement puts a special emphasis on economic sustainability, which bears out that the author comes from the financial sector. However, it relates as well to environmental and social factors, highlighting the importance of the circularity of sustainability. For this reason, the uniqueness of this answer was rated with the highest score. It is crucial that economists share a highly sustainable mindset, since it contributes immensely to maintain a healthy economy.	3	3	3
4	This answer is considered rather an explanation of the term sustainability, without sharing any personal opinions. For this reason, as it shows a certain understanding of the topic, awareness and coherence was rated with a medium score. It does not provide any	2	2	1

	additional output for this paper; therefore, uniqueness is rated with the lowest score.			
5	This statement shows a different, less scientific point of view about the term sustainability. It shares a rather spiritual point of view, which is an important factor to mention regarding environmental consciousness. It definitely shows the awareness of the participant, but it does not provide further arguments. Therefore, awareness and coherence are rated with a middle score. Uniqueness is valued the same as before, by giving an insight about a spiritual, slightly more environmentally conscious opinion, but without going more into detail.	2	2	2
6	This interview as well, reflects clearly the background of the participant. The response is highly focused on the aspect of social sustainability, which reflects that the interviewee treats people on a daily basis. However, only environmental sustainability was mentioned among the other factors, it was understood due to the high emphasis on employee wellbeing and satisfaction that the third, economic factor is just as important. Due to the lack of details, awareness was rated with a middle score. The arguments were logical and easy to follow, therefore coherence was rated with the highest score. Uniqueness as well, because of the detailed personal insight about the importance of sustainability. The answer also emphasizes the importance of a conscious managerial mindset. This particular case, transmits how employees are treated by management, also the importance of mutual respect and treatment, which is crucial in today's world.	2	3	3

The structured summary above indicates the importance of the meaning of sustainability for different individuals. The first three answers stood out with their uniqueness and clear relation to the professional background of the individuals. Since the interview was not structured or directed, each individual interpreted the question in their own way – What sustainability means to you? – which was intentional, in order to receive unique answers. The question was placed by using the words “to you”, in order to direct the answers in a personal direction, to gather unique answers. For the evaluation of this data no existing theoretical structure was used, due to the uniqueness of the study. The evaluation approach was designed for this

research specifically. To ensure data reliability, data triangulation was used. This refers to the relationship between interviews and the survey, because of their complementary nature due to the partially same participants. Data was collected through different channels – email, phone, in person interview (Rugg, 2010). Location and time of the participants was also different, consequently the time as well. The weakness of the last two answers can be related to the linguistic difference, since the question was placed in different languages and the answer was translated to English. This will be detailed further in Paragraph 5.5, by discussing the limitations of this study.

## **4.6 Conclusion**

Results introduced in this chapter revealed and confirmed the importance of sustainable business behavior. Several correlations were introduced using the dataset retrieved from the survey, which helped to provide an overview about the conducted research and its main background information. The research has provided a deeper insight in the field of sustainability by analyzing the relationship between business behavior and employee attitudes. The result indicates that there is a moderate correlation between business behavior and employee attitudes, which reaches beyond the corporate environment. This paper intended to focus on the effects of business behavior and employee attitudes, outside of the work environment. Since most of the available existing research was conducted in a corporate setting, the results of this paper contribute to providing knowledge on the lasting effect of the above detailed relationship to an individual's private life. Further findings state that individuals are not motivated to apply to a job by the sustainable behavior of the employer organization. The questions designed to measure employee awareness and influence functioned as expected, by indicating that participants' perception has changed after filling out the survey questions, indicating that employees perceived a slightly higher sustainable business behavior than was measured at the end of the study. It must be stated that these results are reliable in the context of this research. Exploratory results highlighted the important variables related to the topic, such as gender or experience level showed that there is significantly low or no correlation between the variables. On the other hand, a positive correlation was discovered between employee satisfaction and sustainable organizations. Also, the information gathered through the qualitative data supported the main statement of this paper, which is the importance of a sustainable mindset. Results of the interviews supported this study by providing a deeper insight on how individuals in high or influential positions think about sustainability. Certain limitations and remarks emerged throughout the evaluation process, which will be introduced in detail in the following chapter.

## 5 CONCLUSION

### 5.1 Introduction

This research has explored the potential relationship between sustainable business behavior and employee attitudes, by investigating whether the effect of such a corporate behavior can create lasting impact on the individual's behavior. Following the logical structure of the findings, this section of the paper summarizes the results, starting with the main hypothesis. To continue an overall conclusion will be drawn about the additional outcomes of the research. This was followed by a discussion about the contribution of this study to existing knowledge. As it was mentioned previously, strength and limitations will be introduced in this chapter, as well as recommendations. The latter shares the thoughts about future research suggestions and concludes the most important advice for businesses to improve their sustainable behavior and create lasting results.

### 5.2 Summary of findings and reflection

This research aimed to identify the effects of sustainable corporate behavior on employee attitudes in the context of environmental sustainability. Based on the qualitative analysis conducted in this study in a form of survey designed particularly for this research, results suggested that there is a moderate correlation between the two main factors. Results will be summarized, by answering the main research question of this paper:

“Is an environmentally sustainable work environment able to influence employees in a positive way?”

The main outcome of this study was a confirmation of the existing relationship between sustainable business behavior and positive employee attitudes. The results of the correlation analysis indicated that there is a positive, yet moderate relationship between the two variables. This indicates that organizations effectively practicing environmentally sustainable behavior towards the stakeholders are able to create a certain impact on employees' behavior. This factor was measured, through analyzing the variables of employee attitudes, which demonstrated that their behavior has changed in some aspects, during their employment in the respective organization. However, due to the relatively low, but positive correlation, the conclusion can be drawn that the influence is quite insignificant. Previous research indicated (Huffmann and Kein, 2013) that studies related to this field were mainly conducted in a corporate setting, analyzing the relationship of the effects of sustainable business behavior within the corporate culture. These

studies confirmed to a certain extent that it has an influence on the performance and green citizenship behavior of the employees within the enterprise. On the other hand, this study was investigating the effects of business behavior outside of a corporate environment. Analyzing the correlation, it can be stated that the effect on attitudes is quite heterogeneous. Also, results suggested that some individuals were already environmentally conscious before their respective jobs. Therefore, it is difficult to find an exact relationship between the two main variables. There are some variables which appeared to have a stronger relationship with the main factor, whereas others indicated that there is no relationship between employee attitudes and business behavior. Regarding the main hypothesis of this paper, there were no direct expectations for the results, due to the nature of the topic. This area of sustainability is poorly discovered, therefore the goal of this research is rather exploratory, than confirmatory. It can be stated that positive outcomes were hoped for, rather than expected.

Results of exploratory findings discovered interesting relationships. The answer for the second, supportive research question indicated that enterprises with sustainable strategies do not attract employees with a pro-environmental mindset. Furthermore, it suggested that the majority of the participants are not suited with a pro-environmental mindset. However, in case of these findings, the question arose, whether sustainability is a factor in the job seeking process of the individuals. This question is suggested to be the topic of future research.

The correlation between the awareness and influence control questions suggested that there is a no clear relationship that the survey has influenced the opinion of the participants regarding their awareness on the social, economic and environmental behavior of the organization where they are working. The results addressed that the most changes were noted in employee's perception related to environmental sustainability and the least in economic sustainability. Additionally, scores demonstrated that there was an overall decrease in the results, which suggests that due the survey questions, some opinions have changed in these aspects, however based on the results indicated in Paragraph 4.4.1, the difference is considered to be insignificant. The expectations with the use of this approach were met, since it was integrated in the survey especially for the reason to discover, whether the survey had an effect on participants opinion. Furthermore, these questions support the importance of qualitative research, by providing clear results of the somewhat poor perceptions related to the concept of sustainability. Therefore, in this scenario results have matched the expectations.

Some of the explored findings related to the general information gathered through the survey demonstrated a high correlation. A significant relationship can be stated between the analyzed

company groups and the business behavior variables. This analysis resulted as expected, thanks to the grouping process of the companies. A positive correlation was found between business behavior and employee satisfaction, which suggest that employees of sustainable organizations are in general happier. This conclusion was drawn in previous studies as well; therefore, these results were expected. On the other hand, the relationship between variables such as experience level or gender and the individual's environmentally sustainable mindset turned out to be insignificant. Findings related to gender have matched the expectations, since previous studies suggested the same information. With regards to company size and business behavior, expectations did not meet the results of this paper. Existing knowledge suggested that larger organizations tend to be more sustainable, the findings of this paper stated the opposite. The relationship between geographic location and company groups have resulted to be insignificant as well.

The results of qualitative findings were a highly supportive input to emphasize the importance of this paper. As the significance of managers' mentality in having a sustainable impact on employees was previously confirmed by existing knowledge, the statements of the interviews concluded the same. In some cases, a deeper insight was expected regarding the personal approaches in practicing sustainability, but the lack of this information can be considered as a weakness of the interview structure. The suggestion of the importance for further investigation of this topic, will be detailed in Paragraph 5.5.

### **5.3 Contributions of the research**

The main problem that this thesis investigates is the importance of positive influence of businesses in the context of environmental sustainability. As it was highlighted in Paragraph 1.2, individuals spend an important part of their life working. Therefore, it is crucial that businesses learn how to affect employees positively. This paper tackles the importance of a sustainable business behavior towards stakeholders. This particular problem was investigated, due to the urgent need to solve the rising environmental, social and economic issues of sustainability and to discover whether businesses have the power to create individuals who are contributing to this important fight outside the corporate environment as well. This paper contributed to this problem, by discovering the existing relationship between business behavior and employee attitudes, however results indicated that this relationship is moderate. Therefore, it is difficult to make such a statement that sustainable business behavior is able to influence employees in a positive and lasting way outside of the workplace. On the other hand, this paper serves as a tool to provide evidence for the existing relationship. Additionally, several factors were highlighted which had positive correlations in the study. Quantitative data confirmed the importance of a

sustainable mindset in managerial positions, also it provided proof of its existence. Conclusively, this paper has served as an initial base for future research in this area, which was barely investigated for this perspective. As it was addressed in the literature review, limited relevant research was found on investigating the relationship between business behavior and employee attitudes outside of a work environment. This paper contributed to this gap by gathering information on employee behavior outside the corporate setting. The findings of this paper confirm some of existing theories, mainly by highlighting the importance of a sustainable leadership style. This aspect resulted to be the most important influencing factor between business behavior and employee attitudes.

#### **5.4 Strength and limitations**

This paragraph highlights the strengths and limitations of this paper. One of the major aspects which this paper considered to provide a strong output, was the outcome of the quantitative research. The data gathered was considered to be able to analyze relatively easily, which was due to the structure designed for the survey. Additionally, to the structure of this paper, several participants provided their feedback about the importance of the first questions, which particularly provided short definitions about each pillar of sustainability, which served as one of the main measurement tools of the paper. Participants claimed that this introduction helped them to relate faster to the topic and they felt that they were able to provide more accurate answers. This was also confirmed by the influence control question, due to the relatively small difference between the two questions. Participants also claimed that this survey has raised their awareness regarding the importance of sustainability and made them realize important factors of what they should be aware of at their workplace. Such feedbacks were the reason that it was worth to conduct this study. Also, the results of the qualitative research are considered to provide supportive complementary output for the findings of the survey. Also, interviews helped to provide more detailed information to explain a complex term.

One of the major limitations or weaknesses discovered throughout the evaluation process of the results, was the limitation caused due to linguistic and cultural differences. During the qualitative data gathering process, two individuals were interviewed in their mother tongue, whose answers resulted to be the weakest in answering the questions and providing this personal insight the questions were requesting. Furthermore, it is more challenging to uphold, evaluate and demonstrate rigor, as well as analyzing and interpreting the amount of data takes a lot of time. The main motivation behind using both research methods, since quantitative statistics may disregard the intentions, feelings and makes it more difficult to measure personal

experiences of the participant. It can be considered as a limitation regarding the sample size that approximately 20% less individuals participated in the survey as expected. The achieved sample size is considered to be sufficient to provide realistic results, however with a larger sample group it is simpler to determine whether a specific result is a true discovery, also in some situations it reduces the likelihood of emerging errors.

Some questions of the survey do not provide the expected outcome, which could have been avoided with the different formulation of the question. Additionally, it should have been considered more carefully when formulating the questions, to harmonize the answers with the expected outcomes, so recoding the answers would have been easier. Some aspects of limitations regarding the validity of the data should be considered as well. There is no such thing as a perfectly controlled experiment, since the occurrence of human errors can be difficult to avoid. Furthermore, in surveys such as the one conducted in this particular paper, the probability of research bias can be higher, since the topic of sustainability is a delicate area in terms of self-reflection, therefore some answers can be influenced by providing more socially desired answers. Moreover, this paper included some questions which created uncomfortable feelings in participants. However, this paper investigates a sensitive topic, therefore such questions were inevitable to include. To decrease the occurrence of such research bias, the anonymity of the survey participants was set as a requirement. Additionally, the answers were rather based on personal opinions and feelings, therefore the subjectivity of the answers is also considered as a limitation.

## **5.5 Recommendations**

As it was briefly commented previously, this paper created a base for future research, by providing evidence on the existing relationship between business behavior and employee attitudes. It definitely confirmed that this topic should be further investigated. If researchers are planning to do so, I would recommend doing a case study on a highly sustainable enterprise, concentrating only on the influence of the organization on creating a lasting change in employee attitudes. If the organization reaches the set criteria of measuring sustainability before the quantitative or qualitative research phase, then the research process can only investigate employee behaviors, which would provide more accurate results in terms of the influence on attitudes. Additionally, to better understand the implications of these results, future studies could address the private behavior of the individuals. Furthermore, to enrich the results of this paper, future research should investigate the tools of how organizations are able to create a positive influence which is able to affect the personal lives of employees.

In general, this paper emphasized the importance of practicing sustainable business behavior as it is as important as individuals acting conscientiously in their private life. Organizations should consider creating or strengthening their sustainable strategy, due to the added benefits of this behavior. As existing knowledge discovered, employees in sustainable organizations are in general happier than others. This paper has confirmed the same results, consequently highlighting the benefits of acting conscientiously. Furthermore, businesses should consider it as an important aspect to create a strategy which targets to create a lasting influence. To reach this goal, the Personal Sustainability Plan program introduced in Paragraph 2.6, serves as a tool to motivate and influence employees. Motivation is key to flourish and move forward in this life. Therefore, businesses should make this their top priority, when it comes to reaching a certain goal.

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## Appendix 1: Survey Questions

### Awareness Control Questions

**1. On a scale of 1-5 please rate, how important are the following aspects for the company where you are working, where 1 is not important and 5 is very important:**

**12345**

- Social Sustainability

(Social sustainability is a process for creating successful places that promote well-being by understanding what people need from the places they live and work.)

- Environmental Sustainability

(Environmental sustainability is about acting a way that ensures future generations that have the natural resources available to live an equal, if not a better, way of life as current generations.)

- Economic Sustainability

(Economic sustainability refers to practices that support long-term economic growth, without negatively impacting social, environmental and cultural aspects of the community.)

### PHASE 1

#### **Social Sustainability**

**2. On a scale of 1-5 please rate the following statements, where 1 it is not true at all and 5 is absolutely true about yourself:**

(It measures the social sustainability, wellbeing of the organization)

**12345**

- I believe I receive an adequate salary for my work and position.
- I have flexibility in starting and finishing my shift, meanwhile I respect the working hours in my contract.
- My extra working hours are paid properly.
- I have the possibility to work from home.
- I can choose freely when to take my holidays.

- I am provided with free coffee and water in the workplace.
- I am provided with free food or discounts in restaurants by my employer.
- I have flexible lunch breaks.
- My health is regularly controlled.
- I am provided with the appropriate PPE (Personal Protection Equipment) to perform my job safely, by taking care of myself and others as well.
- I have received work security training.
- I feel safe at my workplace.
- If I feel anxious, I can always talk to someone at the workplace.

### **Economic Sustainability**

**3. On a scale of 1-5 please rate the following statements, where 1 it is not true at all and 5 is absolutely true about yourself or your organization:**

(It measures the economic sustainability of the enterprise)

**12345**

- I am not aware about any corruption issue in the organization where I am working.
- The company where I am working supports organizations within the nonprofit sector. (Charities, foundations, philanthropists, etc.)
- The organization where I am working, prefers to collaborate with local businesses.
- The organization where I am working prefers to buy products of local businesses.
- The company where I am working supports RDI (Research, Development and Innovation) projects outside the organization.
- The company where I am working has a long-term strategic plan.
- The company where I am working, supports the Sustainable Development Goals of the United Nation.
- The most important department in my organization is Research and Development.
- The company where I am working invests a significant amount for innovation within the organization.
- The company where I am working, operates based on an ISO plan.
- The company where I am working, has an elaborated plan for the life-cycle of the products.
- The company where I am working, has an elaborated plan on waste management.

**PHASE 2****Environmental Sustainability**

**4. On a scale of 1-5 please rate the following statements where 1 is not true at all and 5 is absolutely true about yourself: multiple choice grid, 5-point Likert scale**

- Sometimes I feel pressured by society about being more environmentally conscious.
- I am more likely to purchase an environmentally friendly product, even though it is more expensive. I have a personal.
- I have a personal responsibility to help make a difference on environmental issues, like minimizing waste, resource consumption, water use and energy use.
- Climate change is very important to me personally.

**5. Were you motivated to apply to your current job because of its sustainability and environmental consciousness?**

- Yes
- No

**6. Please select, if you are provided with one of the following eating and drinking options at your workplace: (multiple selection)**

- Reusable water cups
- Microwave to heat own food
- Washable cutlery
- Coffee machine
- None of the above

**7. Are you required to recycle waste at your workplace? (Food, packaging, work materials, etc.)**

- Yes
- No
- No, but I am doing it individually

**8. Is your employer supporting you in using sustainable transportation? (Electric cars or electric car chargers, city bike, electric scooter)**

- Yes
- No
- No, but I would like it

**9. Are there policies, which are limiting the use of paper in your workplace (no printing, recycled paper etc.)?**

- Yes
- No
- No, but I would like it

**10. Have you received environmental training at your current workplace?**

- Yes
- No
- No, but I would like to

**11. Are you recycling at home?**

- Yes
- No

### PHASE 3

#### **Employee Attitudes**

**12. If yes, have you decided to recycle at home, because you have to recycle at your workplace?**

- Yes
- No

**13. Have you started to use public transport, bicycles or electric vehicles to commute to work since you are working at your current workplace?**

- Yes
- No

**14. In which of the following aspects do you believe that the sustainable environment at your workplace made you a more conscious person?**

- Social
- Environmental
- Economical
- None of the above

**15. Does your current workplace influence you to change your lifestyle to better suit the environment?**

- Yes
- No
- A little

**16. Does your work environment influence your consciousness about your consumption habits?**

- Yes
- No
- A little

**17. How important is environmental consciousness to your colleagues at your workplace? (1 not at all 5 very important)**

**18. Do you think that it would be more difficult to build relationships with your colleagues, if they would know that you are not environmentally conscious?**

- Yes
- No

**19. Do you feel that your contribution to the green strategy of your company doesn't make sense at all?**

- Yes
- No

**20. On a scale of 1-5 please rate the following statements, where 1 is not true at all and 5 is absolutely true about yourself:**

- In general, I feel that the organization where I am working had a good influence on me.
- Before I started to work at my current workplace, I didn't know a lot about sustainability.
- I learned to recycle waste, since I am working in my current job.
- My colleagues influenced my consumption habits positively.
- The organization where I am working, raised my consciousness about environmental issues.

- Since I am working at my current workplace, I am raising the consciousness of other people about environmental issues.
- Since I am working at my current workplace, I started to buy only local and seasonal products.
- The company where I am working motivated me to do further research about environmental issues.
- I was already environmentally conscious, before I started working at my current job.
- My current workplace had no influence on my recycling habits.
- My current workplace had no influence on my consumption habits.

#### PHASE 4

### **General Information**

#### **21. What is your gender?**

- Male
- Female
- Other
- Prefer not to say

#### **22. How old are you?**

- 15-20
- 21-25
- 26-35
- 36-45
- 46-55
- 56-65
- 65+

#### **23. What is your experience level in your current job?**

- Internship
- Entry level
- Associate
- Mid-Senior level
- Director
- Executive

#### **24. In which country are you working?**

..... Short answer

**25. What is your highest qualification?**

- Middle School
- High School
- College
- Graduate
- Post graduate
- Doctorate
- Other

**26. In which company are your working?**

..... Short answer

**27. What is the size of the company where you are working? Multiple choice, one answer**

- Micro: 1 to 9 employees
- Small: 10 to 49 employees
- Medium: 50 to 249 employees
- Large: 250+ employees

**28. Are you happy at your current workplace?**

- Yes
- No

**Influence Control Questions**

**29. Remember, that in the beginning of the questionnaire you were asked to rate your company regarding its sustainability. Now, that you have finished the questionnaire, answer again this question: On a scale of 1-5 please rate, how important are the following aspects for the company where you are working, where 1 is not important and 5 is very important:**

**12345**

- Social Sustainability

(Social sustainability is a process for creating successful places that promote well-being by understanding what people need from the places they live and work.)

- Environmental Sustainability

(Environmental sustainability is about acting a way that ensures future generations that have the natural resources available to live an equal, if not a better, way of life as current generations.)

- **Economic Sustainability**

(Economic sustainability refers to practices that support long-term economic growth, without negatively impacting social, environmental and cultural aspects of the community.)

## Appendix 2: Interview Answers

1	<p>“Sustainability should not be something that we have to force but rather a normal way of living on our planet. Sadly, the enormous level of consumption in the recent decades caused irreversible damages on the Earth. My biggest goal as a leader of an environmental protection and remediation company is to make sustainability a core part of our daily operation. We calculated our CO2 emission and we have targeted each area where we could reduce our emission. We have developed new remediation technology to reduce our car emission, have introduced 2 days of home office, are constantly organizing CSR events, are part of a net zero workgroup to advice changes to the government and so on. For me it is the only way to operate a SME. If we do not take actions then there will be no future to look forward to.”</p> <p><b>Lilian Hollmann, Managing Director – Zábbrák Kft (Budapest, Hungary)</b></p>
2	<p>“Sustainability, from my point of view, has a meaning that needs to include or take into account three features: responsibility, efficiency and resilience.</p> <p>On the one hand, any action that wants to be considered sustainable needs to be intrinsically, in my opinion, responsible with regards to environment, society and economy, among other factors. In other words, sustainability cannot endanger climate or biodiversity, but it also ought to refrain from creating further inequalities in our societies or only benefitting some specific socioeconomic individuals or sectors.</p> <p>On the other hand, in my opinion, sustainable actions, products or services should also be efficient. Any action that intends to be consider as sustainable cannot create spillages or give place to a significant loss of energy that defies the purpose of the supposedly sustainable action.</p> <p>Finally, I believe sustainability is entangled with resilience in the sense that any action, product or service whose purpose is short-timed or does not consider the potential loss of usefulness in a longer term cannot call itself sustainable.</p> <p>There are, of course, many other aspects that can (and should) be considered in order to establish an exhaustive definition of sustainability, but I reckon responsibility, efficiency</p>

	<p>and resilience are three features that ought to be included as <i>_sine qua non_</i> traits of anything that can be considered as sustainable.”</p> <p><b>Eugenio Diaz Llabata, Press Officer at the European Parliament (Madrin, Spain)</b></p> <p><b>***Disclaimer:</b> “The opinions stated here, reflect only a personal point of view and in no case can be taken as an official statement attributed to the European Parliament or any European Institution.”</p>
3	<p>“Sustainability encompasses the responsible and balanced approach towards meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.</p> <p>From an environmental perspective, sustainability means safeguarding natural resources and ecosystems, mitigating the impacts of climate change, and promoting conservation practices.</p> <p>Economically, sustainability requires striking a balance between growth and resource management. Traditional models of economic growth based on increasing GDP and consumption, have led many to argue that a sustainable economy requires de-growth, because it requires less consumption. However, a sustainable economy does not inherently imply de-growth; rather, it centers on finding a balance between economic progress and environmental preservation. It emphasizes resource efficiency and responsible consumption. By transitioning towards a circular economy, where resources are continually reused and waste minimized, the sustainable approach seeks to alleviate pressure on natural resources, while maintaining economic activity. Moreover, investing in sustainable sectors, such as renewable energy and eco-friendly infrastructure, further demonstrates the potential for economic expansion while promoting sustainability.</p> <p>From a social standpoint, a sustainable economy prioritizes social and inclusive growth, striving to bridge the gap between economic prosperity and societal well-being, ensuring equitable distribution of benefits for all members of society. This comprehensive approach to sustainability aligns economic, social, and environmental objectives, fostering a prosperous and resilient future for generations to come.”</p> <p><b>Anonym participant - Officer at an International Financial Organization (USA)</b></p>

4	<p>“Sustainability refers to the practice of meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. It involves finding a balance between social, economic, and environmental factors to ensure long-term well-being and the preservation of natural resources. Sustainable practices aim to minimize negative impacts on the environment, promote social equity, and support economic development that is both environmentally friendly and socially responsible. This can include actions such as reducing carbon emissions, conserving resources, promoting renewable energy, adopting eco-friendly practices, and fostering social inclusivity.”</p> <p><b>Anonym Participant - Sales Team Lead at a Multinational IT Organization (Hungary)</b></p>
5	<p>“A holistic paradigm that seeks to care for and protect the planet and all its life forms, including human and non-human beings. It is based on respect for biological diversity, intergenerational equity, ecological interconnection, voluntary simplicity and limitation of consumption, environmental responsibility and reconnection with nature.”</p> <p><b>Rita Delgado Correcher – Human Rights Officer at Löning GmbH and Professor at ESIC Business and Marketing School (Germany and Spain)</b></p>
6	<p>“To keep your clients and your employees trustworthy and respected and close together and to keep the same employees and customers for a long time, years. This is actually what sustainability means to me. Besides all of that, we don’t print every email, we recycle, we buy from accountable suppliers, who are certified as sustainable businesses. Also, the question raises: Why shouldn’t we be sustainable at all? Why should we sacrifice our planet for being non sustainable? You need to be sustainable and think about your environment and nature. We should all be at the point to focus on that. For me, as I said before, to keep your employees happy and healthy for years and to create good employee attitudes when they come to work. Also, not having too much employee and customer turnover. This is the most valuable key factor for sustainability to me. It is beautiful to have people who are with you 10 years, 12 years, 7 years whenever they stepped in. Everybody is welcome, but not everybody can stay. High quality of personalities and good characters, respectful way of dealing with your people and customers, also they are treating you respectfully. This is what sustainability means to me.”</p> <p><b>André Aliou – CEO and Founder of Embassy Service Vienna and GEDS GmbH (Vienna, Austria)</b></p>

