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## **Sustainable Practices impacting Employee Engagement and Well-being**

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Master's in International Management

Supervisor:

PhD Leandro Luís Ferreira Pereira, Assistant Professor  
ISCTE-IUL

August, 2021





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## **Abstract**

As sustainability grows in importance, it becomes relevant to understand how the implementation of sustainable practices across organizations impacts the employee-organization relationship.

This study aims to explore the effects of Perceived Organizational Support Toward the Environment on the Employee Engagement and Subjective Well-being and to assess to which extent Employee Engagement impacts Subjective Well-being.

The data was collected through a questionnaire resulting in a cross-national sample of 230 individuals. The data was analyzed through Structural Equation Modelling, allowing the identification of relationships among the constructs.

The results allowed to conclude that Perceived Organizational Support Toward the Environment has a positive significant effect on Employee Engagement as well as there is no direct significant positive effect from Perceived Organizational Support Toward the Environment on employees' Subjective Well-being. Lastly, the results allowed to conclude that Employee Engagement had a significantly strong positive effect on Subjective Well-being.

**Keywords:** Perceived Organizational Support Toward the Environment, Employee Engagement, Subjective Well-being, Sustainability

**Journal of Economic Literature (JEL) Codes:** M1 Business Administration, M5 Personnel Management





## Resumo

Dada a crescente importância da sustentabilidade torna-se relevante perceber como é que a implementação de práticas sustentáveis nas organizações impacta a relação colaborador-organização.

O objetivo deste estudo é explorar o efeito do Apoio Organizacional Percebido em Relação ao Meio Ambiente nos níveis de Engagement e Bem-estar Subjetivo dos Colaborares, bem como avaliar o impacto do Engagement sobre o Bem-estar Subjetivo.

Foi realizado um questionário que resultou numa amostra de 230 indivíduos de diferentes países. Os dados foram analisados através de um Modelo de Equações Estruturais que permitiu identificar das relações entre os construtos.

Os resultados permitiram concluir que o Apoio Organizacional Percebido em Relação ao Meio Ambiente tem um efeito positivo significativo nos níveis de Engagement dos Colaborares, bem como mostraram que não há um efeito positivo significativo direto do Apoio Organizacional Percebido em Relação ao Meio Ambiente sobre o Bem-estar Subjetivo. Finalmente, os resultados permitiram concluir que o Engagement teve um efeito significativamente positivo forte no Bem-estar Subjetivo.

Palavras-chave: Apoio Organizacional Percebido em Relação ao Meio Ambiente, Engagement dos Colaboradores, Bem-estar Subjetivo, Sustentabilidade

Códigos Journal of Economic Literature (JEL): M1 Administração de Empresas, M5 Gestão de Pessoal



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## **1. Introduction**

Sustainability has, not so recently become one of the greatest challenges faced by nowadays society. Organizations are no exception to this rule, and so they are increasingly concerned and aware of this matter. Nevertheless, and generally speaking, organizations themselves constitute a part of the problem, due to the ongoing and often significant environmental impacts resulting from organizations' day-to-day operations. Facing this, organizations have been investing in strategies that aim to contribute to the progressive improvement of the environment.

Besides being a valuable asset for the overall organizations' performance (Anitha, 2014), employees also play an important role when it comes to help their companies to promote sustainable behaviors. However, this role is not yet very well studied in what regards the workplace context (Lamm et al., 2014). In this sense, this research seeks to answer the following question: How do the employees' perceptions regarding organizational support toward the environment relate to their engagement levels and to which degree it impacts their Subjective Well-being?

The purpose of the present research is to determine the effects exerted by the Perceived Organizational Support Toward the Environment on Employee Engagement and Subjective Well-being as well as to assess to which extent Employee Engagement impacts employee Subjective Well-being.

This dissertation will contribute both conceptually and managerially to the ongoing debate on sustainability and its impacts in the corporate context. It will also allow managers and executives of organizations to better understand the relationships of Perceived Organizational Support Toward the Environment, Employee Engagement and Subjective Well-being. By recognizing how each of these constructs impacts the others it may allow the development and implementation of Corporate Social Responsibility programs, consequently promoting overall employee and work outcomes, thus having an impact on the organizations' results.

## 2. Literature Review

### 2.1 Perceived Organizational Support

To explain the concept of Perceived Organizational Support Toward the Environment it is important to take a closer look at the genesis of the concept as well as to explain some key aspects that are critical to understand the construct.

The Organizational Support Theory states that employees form general beliefs regarding how much the organization values their contributions and cares about their well-being (Eisenberger et al., 1997). According to this theory, the development of Perceived Organizational Support is encouraged by employees' tendency to assign to the organization human-like characteristics (Eisenberger et al., 1986). Based on the organization's personification, employees view their favorable or unfavorable treatment as an indication that the organization favors or disfavors them (Rhoades & Eisenberger, 2002). Thus, organizational rewards and favorable job conditions such as pay, promotions, job enrichment, and influence over organizational policies tend to contribute more to Perceived Organizational Support if the employee believes that they result from the organization's voluntary actions. As opposed to with what happens with external constraints such as union negotiations or governmental health and safety regulations (Eisenberger et al., 1986; Eisenberger et al., 1997). For example, if a company decides, by its own initiative to upgrade the compensation and benefits package, the employees are more likely to develop higher levels of Perceived Organizational Support, than if such upgrade was suggested or imposed by a new labor law or government imposition.

The Organizational Support Theory also addresses the psychological processes and the underlying consequences of Perceived Organizational Support (Rhoades & Eisenberger, 2002). Firstly, on the basis of the reciprocity norm, Perceived Organizational Support is expected to cause felt obligation on employees' to care about the organization's welfare and to help the organization reach its objectives (Eisenberger et al., 2001). Secondly, the feelings of approval and respect toward the company implied by Perceived Organizational Support should fulfill socioemotional needs, leading workers to incorporate organizational membership and role status into their social identity (Rhoades & Eisenberger, 2002). Lastly, Perceived Organizational Support should reinforce the employees' beliefs that the organization recognizes and rewards outstanding performance. These psychological processes should have favorable outcomes for both employees and the organization (such as increased commitment, better performance as well as reduced turnover rates) (Rhoades & Eisenberger, 2002).

Throughout time Organizational Support Theory has been increasingly relevant due to the potential value of viewing the employee-organization relationship from the employees'

perspective. The growing importance of this theory is also related to the clarity of the Perceived Organizational Support construct and its associations with affective organizational commitment as well as with other attitudinal outcomes (Kurtessis et al., 2015), such as Employee Engagement. Theories such as the Organizational Support Theory generated greater awareness for organizations, which are still increasingly concerned with finding new ways to better understand the previously mentioned employee-organization relationship and which factors influence employee behavior toward the organization. These concerns seem to be of high importance and more sustainability related as climate and environmental issues become hot topics in the business agenda (Lamm et al., 2014). As a consequence of the increasing concern with having a sustainable agenda, organizations are “transforming their operations by integrating social and environmental dimensions into their business models.” (Chaudhary, 2020, p. 630). Such transformations may include optimization of manufacturing processes, and thus the implementation of greener policies and practices became part of various functional domains of organizations, usually in the form of green marketing, green supply chain and more recently green human resource management (Chaudhary, 2020).

Despite the importance of top-down initiatives, the role of human capital is critical in order to successfully implement a corporate strategy as well as to achieve organizational goals. Researchers have been arguing that it is crucial to align human resources management with the environmental management system to fulfil the organization's environmental sustainability goals (Chaudhary, 2020).

Numerous companies have been implementing sustainability initiatives designed to decrease their environmental footprint. However, to be effective, the sustainable mindset has to be embedded across the organization and incorporated in a solid sustainability strategy (Lamm et al., 2014).



## **2.2 Perceived Organizational Support Toward the Environment**

Throughout the years, theories and models as the norm-activation model (Schwartz, 1977), the theory of planned behavior (Ajzen, 1991), and the values-beliefs norm theory (Stern et al., 1999) have been developed to better explain pro-environmental behavior. However, such theories were widely applied to “the study of consumers in domestic contexts, rather than to employees in the workplace.” (Lamm et al., 2014, p. 208). In the workplace context the organizational justice theory stands out, contending that “employees' needs for control, for belongingness, and for a meaningful existence will lead them to push firms to engage in social change through CSR (Corporate Social Responsibility).” (Aguilera et al., 2007, p. 851). The fundamental topic behind these theories and models is that there are characteristics of the sociopolitical environment that encourage and motivate individuals to act in sustainable ways (Lamm et al., 2014). Some of these characteristics refer to elements of the work context, namely the support shown by the organization toward the climate, the employee's perception that the organization values their contributions and cares about them and the level of trust that the organization has in the employee (Seibert et al., 2011).

From the analysis of the construct Perceived Organizational Support, it is arguable that it represents a set of generalized beliefs. Throughout time, it was necessary to introduce a new construct, one that could better represent sociopolitical support for sustainability (Lamm et al., 2014).

To seal this gap the construct Perceived Organizational Support Toward the Environment emerged. It was drawn from the Perceived Organizational Support construct and is defined as the set of “specific beliefs held by employees concerning how much the organization values their contributions toward sustainability.” (Lamm et al., 2014, p. 209).

Due to its nature, Perceived Organizational Support Toward the Environment shares key characteristics with its counterpart Perceived Organizational Support, such as beliefs that the organization is providing opportunities, allowing autonomy over decision-making and beliefs that the organization values employees' contributions. However, Perceived Organizational Support Toward the Environment directly specifies organizational support for sustainable behavior whereas Perceived Organizational Support refers to a broader range of contributions (Lamm et al., 2014).

Research has shown that employees' voluntary actions toward the environment may depend on the employees' perception of the degree to which the organization supports such behaviors (Lamm et al., 2014). Given the evidence that when employees feel supported, they will consequently perform in a more sustainable way (Lamm et al., 2014), it is relevant to identify further relations that the construct Perceived Organizational Support Toward the Environment will have on other work dimensions to be studied.

As demonstrated by Lamm et al. (2014), Perceived Organizational Support is positively related with Perceived Organizational Support Toward the Environment as well as the latter positively impacts psychological empowerment of employees who value environmental sustainability. It is also relevant to note that Perceived Organizational Support Toward the Environment is a driver of job satisfaction, organizational identification, and workers' eco initiatives (Bhatnagar & Aggarwal, 2020; Lamm et al., 2014). Such findings suggest that organizations are able to benefit from this support toward the environment thereby, managers have a window of unexplored paths and strategies that will enable the levels of psychological empowerment to increase affecting other work-related outcomes such as Employee Engagement. This work dimension has for some years been on the corporate agenda of many organizations, which have been conducting and implementing engagement surveys amongst their workforces with the aim of understanding which are the dimensions that need to be improved from the employee perspective and including them in the organization's strategic goals.

The determinants of Employee Engagement have already been explored, as well as their impact on employee performance. Research shows that Employee Engagement has a significant impact on employee performance as well as it affects other work dimensions (Anitha, 2014). Other studies approach Employee Engagement as a driver of quite a few organizational outcomes, such as job performance (Bakker & Bal, 2010; Halbesleben & Wheeler, 2008) and client satisfaction (Salanova et al., 2005), ultimately impacting organizations' financial returns (Xanthopoulou et al., 2009) and strategic advancement (Turner, 2019). The evidence presented above and in the terms of what is stated by the Organizational Support Theory confer plausibility to the following hypothesis:

H1: Perceived Organizational Support Toward the Environment has a positive effect on Employees' Engagement levels.

As a final outcome of several work dimensions impacted by the Perceived Organizational Support Toward the Environment, there is the construct of employee Subjective Well-being.

Throughout the years employee Subjective Well-being has been extensively studied. It has been mostly addressed on traditional life satisfaction and well-being studies, namely concerning non-working populations, such as students, medical patients, children, and adolescents (Joo & Lee, 2017). However, and even though adults spend much more of their time at work and also considering that work conditions play a critical role in determining how an individual feels, functions and responds to situations (Fan et al., 2019), the study of employee well-being in the workplace is still lagging.

After extensive readings and research on the construct of Subjective Well-being it is evident that the concept is usually referred, by different authors, as subjective happiness or just as happiness. The construct has later been more precisely defined in the scientific literature (Diener et al., 2017) and more generally addressed as Subjective Well-being, henceforward it will be the used term throughout the present research.

Back in 1999, Lyubomirsky and Lepper introduced the construct of Subjective Happiness as a dispositional factor that allows to explain that “chronically happy and unhappy people would differ in how they distort or manipulate social comparison information, how they use such information, and how they respond to it.” (Lyubomirsky, 2001, p.5). Both happy or unhappy people perceive, interpret, and weigh social comparison information differently. In this sense, perceived Subjective Well-being has a significant influence in the way individuals adopt and react to certain circumstances and everyday life events (De Stasio et al., 2019). For the purpose of this research and namely due to the fact that it is the most widely used definition in similar studies, the Lyubomirsky and Lepper (1999) definition will be followed. This will also confer results a comparability component.

In recent years, happiness has more broadly been seen as a “dispositional measure of Subjective Well-being as it helps to explain why some individuals report greater self-perceived well-being as a function of life changes, while others report the same amount of well-being regardless of life events.” (De Stasio et al., 2019, p.2).

According to Fredrickson’s (2001) “Broaden-and-build Theory of Positive Emotion”: frequent positive affect caused by subjective happiness will influence work outcomes. that It is also known that frequent positive affect often leads people to expand their thought-action repertoire and thereby showing more tendency to be more self-effective, resilient, and optimistic (Fredrickson, 2001).

Further research also demonstrates that, besides the fact that higher Subjective Well-being is associated with positive outcomes, such levels also allow employees to achieve superior performance as well as higher levels of perceived social support from colleagues (Diener et al., 2018). Happy employees are then more likely to be creative, show organizational citizenship behaviors and to deliver higher quality work, whilst showing more propensity to avoid negative and costly traits such as anxiety or emotional burnout (Fan et al., 2019).

It is important to note that research shows that happy people tend to be more active, energetic, and interested in their work (Joo & Lee, 2017). The same logic also applies for what are considered to be happy employees, who are more propense to achieve the desired outcomes. Reportedly, happy workers are more likely to outshine their unhappy counterparts as they generate more job-related resources which in turn leads to lower levels of turnover, less absenteeism, and better social relations at work (Diener et al., 2018). Today,

organizations expect their employees to be proactive, energetic, resilient, to show initiative as well as to take responsibility for their own professional development. For these reasons, organizations have, in recent years shown greater concern on these aspects as it becomes clearer that the employees' health and mindset have a significant impact on performance and on other dimensions directly affecting the organization's overall performance and results.

In this setting, it is critical for organizations, in order to keep a motivated and engaged workforce, to provide its employees the secondary needs (esteem, recognition, self-actualization, among others) along with the primary ones (water, food, safety, among others). By nourishing these needs, organizations are strengthening the feeling of meaning, leading to positive emotions and higher satisfaction levels amongst staff. These findings are consistent with what Maslow (1943) and Herzberg (2005) suggested in their theories. Both authors believe that the provision of primary needs alone is not sufficient to generate higher levels of motivation and engagement in the workplace. Organizations have to take a step forward and provide its employees with secondary needs in order to obtain positive outcomes on this sphere.

Nowadays, employees want to feel that their job is meaningful and tend to find reassurance for this by looking for what their organizations are doing for them at the individual level, but also in what the organization does for society as a whole, namely for the environment (Lamm et al., 2014).

Throughout the years several studies and research have shown evidence that, to successfully implement environment management, the necessary functional and managerial skills must be embedded across the organization's ecosystems. In the same sense of what was previously stated, there is also literature on this field that has explored and proposed the possibility of an organization's green management policies and practices impacting employees' attitudes and well-being. As well as there is empirical evidence suggesting that firms that promote and foster a spirit for environmental sustainability may also influence the sense of belonging of their workforce (Carmeli et al., 2007). In this field, however, there is not much research on the mechanisms used by organizations' to promote sustainable behaviors and green policies and influence employee outcomes, namely Employee Engagement and Subjective Well-being.

In the current setting, employees seek for improved personal well-being and aim to achieve it in an integrated way, and the workplace is no exception as a large portion of their time is spent there. In this regard, in order to become more attractive to talent, namely younger talent, and to have better retention rates, organizations have to develop and implement practices that focus on employee well-being and that make them feel that their job has a purpose and meaning. To do so, environmentally sustainable policies and practices have to be put into

practice and organizations have to “develop ways to resolve individuals’ values with professional value systems.” (Bhatnagar & Aggarwal, 2020, p. 2). Thereby “company objectives can, therefore, be achieved more fully if organizations make use of employees’ environment-related eco-initiatives.” (Bhatnagar & Aggarwal, 2020, p. 2).

Perceived Organizational Support Toward the Environment is positively related with employee outcomes such as the engagement in eco-initiatives. In the same study, the authors also established that employees that experience that their companies value and support the worker’s sustainable attitudes will display more sustainable behaviors themselves as they are more likely to develop positive job attitudes and mental states (Bhatnagar & Aggarwal, 2020). These findings allowed the authors to conclude that “Perceived Organizational Support Toward the Environment is a specific way to enhance environmentally sustainable behaviors” (Bhatnagar & Aggarwal, 2020, p. 16). These results support the statement that organizations experience significant returns when they promote and sponsor sustainable practices and initiatives in and outside the workplace. Thus, and based on the analysis conducted so far, the following hypothesis is presumed:

H2: Perceived Organizational Support Toward the Environment has a positive effect on Employees’ Subjective Well-being.

## **2.3 Employee Engagement**

The concept of “work engagement” emerged in the 1990's as William Kahn published the first scholarly article on engagement at work in the *Academy of Management Journal* (Kahn, 1990). Although it is difficult to come up with an unambiguous answer, it can be speculated that the term emerged in the corporate world a few years later. Firstly, this is mainly due to changes in the world of work, as it shifted from a stable organizational environment to an ever-changing one. Secondly, because horizontal structures turned into vertical ones and which dependence from the organizations was transformed into owned responsibility and accountability (Schaufeli, 2013).

In the beginning of the 21<sup>st</sup> century, Employee Engagement kept on being a key topic on the business agenda as a result of two converging developments: 1) the increasing importance of human capital and psychological involvement of employees in the business; as well as 2) the increased scientific interest in positive psychology (Schaufeli, 2013).

As the construct emerged and grew in popularity, it has undertaken significant changes in definition and measurement (Shuck, 2011). Within the scholarly field, researchers were not very keen on establishing connections between their models, resulting in a non-stabilized

concept (Shuck, 2011). The construct has a “sparse and diverse theoretical and empirically demonstrated nomological net - the relationships among potential antecedents and consequences of engagement as well as the components of engagement have not been rigorously conceptualized.” (Macey & Schneider, 2008, p. 3).

Even though the academic research on the subject kept growing, scholars lagged somewhat behind the practitioner community, which, inevitably, led to different perspectives on the construct: the practitioner approach and the academic approach (Zigarmi et al., 2009), which vary in purpose and in outcome (Shuck, 2011).

Such differing perspectives led to an incoherent set of models and frameworks which slightly hindered the work and research around the construct, thus affecting the application of the concept for both practitioners and scholars (Shuck, 2011). Numerous authors such as Kahn (1990), Schaufeli & Bakker (2004) or Macey & Schneider (2008) have taken their own approach towards Employee Engagement. To disintegrate such variety of conceptualizations and aiming at the synthetization of the current state of scholarly research on Employee Engagement, Shuck (2011) defined four major approaches, each of them stressing a different aspect of engagement as expressed in Table 2.1.

**Table 2.1**  
*The four major approaches to Employee Engagement*

Approach	Relation established
The Burnout-Antithesis Approach	Addressing the engagement positive nature of employee wellbeing as opposed to burnout.
The Multidimensional Approach	Addressing the relation of engagement with the job itself and with the organization.
The Needs-Satisfying Approach	Addressing the engagement relation with role performance.
The Satisfaction-Engagement Approach	Addressing the engagement relation with resourceful jobs.

*Source: Author’s elaboration*

For the present research and mainly due to the fact that Employee Engagement is not often considered as an academic construct, the Schaufeli and Bakker’s (2004) engagement conceptualization, will be followed. The conceptualization is well-validated and is the most often used amongst researchers (Bakker et al., 2008). Accordingly, rather than a momentary and specific state, engagement refers to a “persistent and pervasive affective–cognitive state that is not focused on any particular object, event, individual, or behavior.” (Schaufeli & Bakker, 2004, p. 295). The conceptualization also puts Employee Engagement as “a positive fulfilling, work-related state of mind that is characterized by 1) vigor, 2) dedication, and 3) absorption.” (Schaufeli & Bakker, 2004, p. 295). Vigor, the first dimension of engagement, being

characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence also in the face of difficulties. The second dimension, dedication, refers to being strongly involved in one's work, and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. The third and last dimension, absorption, is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly, and one has difficulties with detaching oneself from work (Schaufeli & Bakker, 2004).

Throughout time Employee Engagement has been shown to be a useful tool to support organizations to strive and to gain competitive advantage over its competitors (Anitha, 2014).

If well managed, human resources constitute a valuable asset for organizations, being difficult to replicate by the competition, thus there is a growing importance of keeping employees happy and satisfied (Anitha, 2014). Employee Engagement has been shown to be positively influenced by organizational policies and procedures put in practice within the organization, which in turn are extremely important to the achievement of business goals (Anitha, 2014).

It is in these areas of personal responsibility, through thoughts and behaviors, that some of the biggest gains in engagement can be found.

As Lyubomirsky et al. (2005) proposed, "changing one's intentional activities may provide a happiness-boosting potential that is at least as large, and likely much larger, than changing one's circumstances" (Lyubomirsky et al., 2005, p. 123). This perspective had been previously resonated by Dalai Lama who stated that "happiness is determined more by the state of one's mind than by one's external conditions, circumstances or events" (Lama et al., 2003, p. 1).

Despite the fact that Employee Engagement is a widely researched and studied topic there are still a few gaps when it comes to the impact of the concept on other increasingly important and emerging constructs such as Perceived Organizational Support Toward the Environment and Subjective Well-being. However, a relationship between Employee Engagement and psychosomatic health (Demerouti et al., 2001) was already observed, moreover, it was observed that engaged workers report a good mental health as well (Schaufeli et al., 2008).

Despite the fact that several empirical studies have been carried out, the relation between Employee Engagement and Subjective Well-being is still lagging (Ibrahim et al., 2020).

Thus, the importance of deepen the research of the effects of such construct in other key variables influencing overall organizational performance, leading to the following hypothesis:

H3: Employee Engagement levels have a positive effect on Employees' Subjective Well-being.

### 3. Methodology

#### 3.1 Research Objectives and Hypotheses

For guiding this dissertation towards its final conclusions and results, issues taken from literature are converted into research hypothesis which are then linked to specific research objectives.

As a starting point, research issues identified by various authors in the literature, are fundamental for the strategy implementation. The research questions as well as the subsequent research objectives, enable the delimitation and consequent guidance of the topics the present research will cover. Table 3.1 enables a clear overview of the research instruments and objectives.

**Table 3.1**

*Research instruments and objectives*

Research Objective	Hypothesis	Autor
Determine to which extent Perceived Organizational Support Toward the Environment influences Employees' Engagement levels.	H1: Perceived Organizational Support Toward the Environment has a positive effect on Employees' Engagement levels.	(Lamm et al., 2014). (Schaufeli & Bakker, 2004)
Determine to which extent Perceived Organizational Support Toward the Environment influences Employees' Subjective Well-being levels.	H2: Perceived Organizational Support Toward the Environment has a positive effect on Employees' Subjective Well-being.	(Lamm et al., 2014) (Lyubomirsky & Lepper, 1999)
Determine to which extent Employee Engagement influences Employees' Subjective Well-being levels.	H3: Employee Engagement levels have a positive effect on Employees' Subjective Well-being.	(Schaufeli & Bakker, 2004) (Lyubomirsky & Lepper, 1999)

*Source: Author's elaboration*



### 3.2 Research Techniques and Procedure

Prior to the application of the questionnaires the process of choosing the measurement scales and assessing the validity of such scales was conducted. Some pre-tests were performed in order to guarantee clarity of the questions as well as the reliability and validity of the survey instruments.

Participants were invited to respond the survey via email, LinkedIn as well as other digital channels. Data was collected from April 30 to May 28, 2021. The questionnaire was developed in Microsoft Office Forms.

Respondents were informed of anonymity and confidentiality before the data collection.

The survey (Annex A) was composed by 38 questions, split into six sections: Perceived Organizational Support Toward the Environment, Employee Engagement, Subjective Well-being, control section, organizational information and lastly the sociodemographic information section.

The data was analyzed, and the Structural Equation Modelling (SEM) was carried out using the AMOS application (Analysis of Moment Structure, v27.0, SPSS, an IBM Company, Chicago, IL). For this purpose, multiple linear regressions were conducted, allowing the identification and detailed description of relationships among the constructs (Schneider et al., 2010). For the analysis, the SPSS software was also used. For the SPSS analysis the variables were coded, and invalid answers were discarded.

For the analysis, estimates  $p \leq 0.05$  were considered significant. A two-step maximum likelihood structural equation modelling procedure was performed using AMOS 27.0 (SPSS Inc, Chicago IL). First, a confirmatory factor analysis (CFA) was conducted to confirm the measurement model. The reliability of the constructs was estimated through Cronbach's coefficient and values above the 0.70 criterion were considered reliable. The average variance extracted (AVE) was estimated to evaluate convergent validity and values greater than 0.50 were considered to demonstrate convergent validity. Discriminant validity was assumed when AVE of each construct was greater than the squared correlation between that construct and any other. Second, the structural model estimation was performed to test the research hypotheses. The appropriateness of the data to both the measurement and structural models was estimated through a variety of goodness-of-fit indices (GFIs).

### **3.3 Measurement Instruments & Scales**

#### **3.3.1 Perceived Organizational Support Toward the Environment**

To assess the respondents' perceptions of Perceived Organizational Support Toward the Environment, the scale developed by Lamm et al. (2014) was used (Annex B). This is a five-item scale from which items were, to some extent, drawn from those of the Perceived Organizational Support scale by Eisenberger et al. (1986). All the five items ask about behaviors and attitudes at work. The respondents were asked to indicate how much they agree or disagree with each statement, through a seven-point Likert scale.

#### **3.3.2 Employee Engagement**

To collect data and assess the respondents' degree of Employee Engagement a self-report questionnaire - the Utrecht Work Engagement Scale (UWES) - was used (Annex B).

The Utrecht Work Engagement Scale (UWES) comprises the three dimensions of work engagement: vigor, dedication, and absorption. Originally, the UWE Scale included 24 items, however, after psychometric evaluation only 17 items remained (Schaufeli et al., 2002). Throughout time and in a very pragmatic way, researchers were striving to include as few items as possible for measuring a particular construct as longer questionnaires increase the likelihood of attrition (Schaufeli, 2006). In this sense, a nine-item version of the UWES which provided evidence for its cross-national validity was established (Bakker et al., 2008). From the nine items of the scale, three of them aim to assess absorption, three to assess dedication, and the remaining to assess vigor. For the present study, the shortened version of the UWES was used.

The UWE Scale allows to measure the degree of Employee Engagement, by asking the respondents to choose, from a seven-point Likert scale, the degree that more appropriately describes the respondent, where: (1) Never, (2) Almost Never (a few times a year or less), (3) Rarely (once a month or less), (4) Sometimes (a few times a month), (5) Often (once a week), (6) Very Often (a few times a week), and (7) Always (everyday).

#### **3.3.3 Subjective Well-being**

To collect data on the respondents' Subjective Well-being, the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999) was used (Annex B). It is a four-item scale that uses a seven-point Likert scale. The first two items ask respondents to rate how they are generally happy about their life, where: (1) Not a very happy person and (7) A very happy person. The last two items ask respondents to what extent the characterization of a happy and of an unhappy person describes them, where: (1) Not at all and (7) A great deal.

## 4. Data Analysis

### 4.1 Participants

To perform the data collection procedure, a convenience sample of 230 individuals was used. More than half of the respondents were women (63.5%), and the mean age being approximately 30 years old ( $M = 30.44$ ), with a minimum of 20 and a maximum of 61 years.

As far as literacy is concerned, 86.9% of participants attended higher education (undergraduate and/or master's), 5.2% only attended high school, whilst 6.5% have completed a PhD. Regarding the country where the respondents spend the most time working, more than half does it from Portugal (77.4%). Only 4.8% of the sample spends most part of their time working in non-European countries, whilst the vast majority does it from countries in Europe (95.2%). From the respondents working in European countries, 89.1% of them works in countries from the European Union, as detailed in Table 4.1.

**Table 4.1***Participants' key characteristics*

Item	Frequency	%
<b>Gender</b>		
Female	146	63.5
Male	82	35.7
Prefer not to answer	2	0.9
<b>Age</b>		
20-29	167	72.6
30-39	26	11.3
40-49	16	7
50-59	18	7.8
60-69	3	1.3
<b>Education</b>		
High School or equivalent	12	5.2
Bachelor's Degree	50	21.7
Master's Degree	150	65.2
Doctoral Degree (PhD) or higher	15	6.5
Other	3	1.3
<b>Country</b>		
Portugal	178	77.4
Europe (except Portugal)	41	17.8
Others (not Europe)	11	4.8
<b>Seniority</b>		
Less than 1 year	92	40
Between 1 and 5 years	96	41.7
Between 5 and 10 years	15	6.5
Between 10 and 20 years	15	6.5
More than 20 years	12	5.2

*Source: Author's elaboration*

For a greater granularity of the data collection, four questions concerning the working organization of the respondents were asked, from which it is possible to state that 40.9% of the sample works in the Health and Life Sciences sector, being followed by 16.1% of the respondents working at the Retail and Consumption sector and, with the remaining 16.1% of respondents working in other industries, 7.8% and 7% working on the Services sector and Banking and Financial Services sector, respectively. The remaining 12.2% of the sample works in organizations operating in other industries, such as Public Administration or Engineering and Construction. More than half of the respondents (53%) works for the private sector whilst 37.4% works for the Public sector, a small share of the respondents (9.6%) works for other

types of organizations, particularly, Public-private organizations and Non-profit organizations. A significant proportion of the sample works for large enterprises and established for more than 20 years, 55.2% and 60.9% of the respondents respectively, as shown in Table 4.2.

**Table 4.2**

*Participants' organizations' key characteristics*

Item	Frequency	%
<b>Company Industry</b>		
Retail and Consumption	37	16.1
Services	18	7.8
Other Industry	37	16.1
Health and Life Sciences	94	40.9
Engineering and Construction	6	2.6
Logistics and Transportations	2	0.9
Bank and Financial Services	16	7
Public Administration	6	2.6
Insurance	6	2.6
Telecommunications	2	0.9
Energy	3	1.3
Hotel and Tourism	2	0.9
Smart Cities	1	0.4
<b>Type of Organization</b>		
Private sector (e.g. most businesses and individuals)	122	53
Public sector (e.g. government)	86	37.4
Public-private organization	13	5.7
Other	3	1.3
Non-profit organization	6	2.6
<b>Organization time in business</b>		
Less than 1 year	14	6.1
Between 1 and 5 years	33	14.3
Between 6 and 10 years	8	3.5
Between 11 and 20 years	35	15.5
More than 20 years	140	60.9
<b>Organization size</b>		
Microenterprise	19	8.3
Small enterprise	32	13.9
Medium-sized enterprise	52	22.6
Large enterprise	127	55.2

*Source: Author's elaboration*

For purposes of control and to allow for richer conclusions, four control questions were included in the questionnaire. In this section, 65.2% of the respondents stated that would recommend the organization they work for as a good place to work. The vast majority of the sample (87.8%) responded “Yes” when asked if outside the workplace they engage in sustainable practices. Only 6.5% of the respondents contended that they do not believe that environmental issues (e.g.: global warming) have a direct impact in their lives. Lastly, when asked if their organization has any kind of environmentally related certification, 48.3% responded “I don’t Know”, whereas only 29.1% answered “Yes”, as in Table 4.3.

**Table 4.3**  
*Control Questions*

Item	Options	F	%
Would you recommend the organization you work for as a great place to work?	Yes	150	65.2
	No	80	34.8
When outside the workplace do you engage in sustainable practices (e.g.: waste reduction, recycling, use reusable bags and bottles, etc.)?	Yes	202	87.8
	No	28	12.2
Do you believe that environmental issues (e.g.: global warming) directly impact your life?	Yes	215	93.5
	No	15	6.5
Does the company that you work for have any kind of certification? (related to environmental and sustainable aspects)	Yes	67	29.1
	No	52	22.6
	I don't know	111	48.3

*Source: Author's elaboration*

## 4.2 Model Assumptions

Structural Equation Modelling (SEM) (Arbuckle, 2007) was used to assess the plausibility of the theoretical and conceptual model, in order to ensure sufficient variability to estimate the model parameters.

To ensure the validity of the model the verification of a set of assumptions is required. On the one hand, without the prior validation of such assumptions the analysis and further conclusions may be undermined. On the other hand, the violation of such assumptions may result in biased results concerning the model adjustment statistics, parameter estimates and respective significance levels (Marôco, 2014).

Firstly, the sample of this study was as random as possible, however, when conducting social research, it is not practical nor feasible in terms of costs and timings to ensure a fully random sample. Secondly, the process of accessing the online questionnaire was triggered to allow only one access by IP (Internet Protocol, IP).

In the context of the regression analysis, it is recommended having, at least five observations per each manifest item of the model. Though, a SEM has, in general, associated to each variable two to three parameters. Thus, to ensure sufficient variability to estimate the model parameters, it is recommended to have 10 to 15 observations for each parameter to be estimated (Jr et al., 2009). Considering that the designed model establishes 18 parameters to be estimated, the minimum sample size is of 180 respondents (1:10). The sample being analyzed has 230 participants, being substantially larger than the suggested dimension.

The Multivariate normality assumption was verified through the verification of the measurements of the shape of the distribution: 1) univariate asymmetry ( $sk$ ); 2) univariate kurtosis ( $ku$ ). Recent research indicates that in SEM, the acceptable values of  $|sk|$  are usually comprehended between two and three, the values for  $|ku|$  are between seven and 10. Thereby, it is possible to state that the values of  $|sk|$  and  $|ku|$  of the present model do not represent a problem in terms of non-normality, as they variate, respectively, between 0.067 and 1.528 and between 0.013 and 1.27.

Each variable being studied was measured using four or more manifest variables (Marôco, 2010), in order to ensure the validation of the scale and the estimation of the model. The Perceived Organizational Support Toward the Environment construct was measured using five items, Employee Engagement was measured using a shortened-scale of nine items, and lastly, Subjective Well-being which was measured using a four-item scale.

The assessment of multicollinearity between the variables under study was performed using the Variance Inflation Factor (VIF), which, to be acceptable, should not be greater than five. Thus, it is possible to confirm the absence of multicollinearity as all the variables show VIF values below five. To ensure variance between the variables being assessed, the items used were measured with a seven-point Likert Scales which allows to verify the assumption concerned with the measurement scale. Finally, another important assumption to be tested is the absence of outliers. Its presence is likely to influence the covariances between variables, which, in turn, may be reflected in the estimates of means, standard deviations and covariances, undermining the quality and fit of the model. The diagnosis of possible outliers and the demonstration of their inexistence was assessed through the most frequently used multivariate measure: the Mahalanobis d-squared distance ( $DM^2$ ). The assumption is verified as  $DM^2 = p_1 < 0.5, p_2 > 0.5$  is verified, otherwise the observation should be classified as a multivariate outlier.

To assess the internal consistency of the scale, the Cronbach's alpha coefficient was calculated for each variable under study. This coefficient measures how closely related a set of items are, as a group. Most of the literature contends that a value equal or greater to 0.70 is considered to be an acceptable value for the Cronbach's Alpha coefficient (Tavakol &

Dennick, 2011). In the present study and as expressed in Table 4.6, the values of Cronbach's Alpha obtained were above the acceptable values, thus confirming the adequacy of the items to measure each construct.

### **4.3 Measurement Model**

In the following section, the treatment, presentation, and analysis of the collected data is presented. In general terms, the objective of this analysis is to verify the hypotheses formulated from the theoretical model, considering the empirical results that were obtained.

The individual viability of the items was evaluated by the Composite Reliability (CR) coefficients, which assess the internal consistency of the items of each construct, indicating the degree to which these items are the result of the latent factor. Additionally, the validity of the constructs was assessed by standardized Factor Loadings and respective significance for each item. For previous exploratory research, a value greater or equal than 0.7 for the CR is appropriate. From the analysis performed, the CR values for Perceived Organizational Support Toward the Environment, Employee Engagement and Subjective Well-being are, as expressed in Table 4.4, respectively equal to 0.841, 0.907 and 0.825, thus complying with the reference values.

In turn, the Factor Loadings for each item are statistically significant when  $p \leq 0.05$  and with a factor loading greater than 0.5, which expresses the factorial validity of the construct. From the statistical analysis performed it is possible to state that for all items, the factor loadings are greater than 0.5, as expressed in Table 5.2. Thus, the evaluation performed ensures that each item is appropriately captured by the respective factor. So that, globally, the results ensure that it is possible to state that the measurement subscales present in the model have appropriate internal reliability and content validity.

The covariances among the constructs are non-null, meaning that they are statistically significant, as they are greater than the reference value of  $p > 0.05$ .

The constructs' convergent validity was assessed by the Average Variance Extracted (AVE). The AVE represents the average percentage of variation between the items representing a construct (Jr et al., 2009). The AVE also seeks to translate how strongly the items defining a given construct represent that construct, or, in other words, to understand if the behavior is predominantly explained by the respective construct. In terms of reference value, it is usual to consider a value greater or equal to 0.5 (Marôco, 2014). As expressed in Table 4.4 the items used to measure the constructs show AVE values between 0.515 and 0.549, thus expressing the internal consistency of the constructs, thereby, globally, it can be stated that the measurement subscales of the constructs have appropriate convergent validity.



**Table 4.4***CR coefficients and AVE for the measurement model*

Construct	CR	AVE
POSE	.841	.515
EE	.907	.528
SWB	.825	.549

Note. CR = Composite Reliability; AVE – Average Variance Extracted. POSE - Perceived Organizational Support Toward the Environment; EE – Employee Engagement; SWB – Subjective Well-being

Source: Author's elaboration

The discriminant validity of the item measures was evaluated by comparing the AVE of each item with the square of the correlation between these items. Discriminant validity seeks to translate how items reflect a given factor and are not related to another one. Thus, whenever the squared correlations between two constructs are smaller than the AVE values, we can confirm that the two factors have discriminant validity. In the present analysis, it was found that the discriminant validity between constructs is always lower than the AVE values, as expressed in the correlation matrix in Table 4.5.

**Table 4.5***Correlation Matrix*

Construct		POSE	EE	SWB
POSE	$\Phi$	1		
	$\Phi^2$			
EE	$\Phi$	.251	1	
	$\Phi^2$	.063		
SWB	$\Phi$	.162	.466	1
	$\Phi^2$	.026	.217	

Note.  $\Phi$  = correlation between constructs;  $\Phi^2$  = correlation among squared factors. POSE - Perceived Organizational Support Toward the Environment; EE – Employee Engagement; SWB – Subjective Well-being.

Source: Author's elaboration

The results show that the model had an acceptable fit: ( $\chi^2$  (132) = 247.971,  $\chi^2$  /df = 1.879). Following Byrne (2010) recommendations, seven indices were considered, reflecting the good fit of the model: (PCFI = 0.813, CFI = 0.942, TLI = 0.933 and RMSEA = 0.062,  $p$ (RMSEA  $\leq$  0.05) = 0.000, IC90% (0.051 – 0.075), GFI = 0.889, PGFI = 0.686 and SRMR = 0.119)).

#### 4.4 Descriptive Analysis

Due to the quantitative nature of the present research one important step of the data analysis are the descriptive statistics, which allow to summarize the key characteristics of the data set.

In Table 4.6 are presented the univariate descriptive statistics, namely measures of central tendency, such as the mean and medians of each item, and measures of variability, particularly the standard deviation.

**Table 4.6**  
*Descriptive statistics of the measurement model*

Constructs/items	Mean	Median	SD
POSE1 - I feel that I am able to behave as sustainably as I want to at the organization where I currently work.	4.46	5	1.657
POSE2 - My organization does not care about whether I behave in a sustainable manner or not.	4.01	4	1.819
POSE3 - My organization provides an incentive for me to reduce the use of non-renewable resources.	3.53	3	1.859
POSE4 - I do not feel that I make a positive environmental impact through work at my organization.	3.79	4	1.762
POSE5 - My actions toward sustainability are appreciated by my organization.	4.20	4	1.598
Cronbach's Alpha 0.840			
EE1 - At my work, I feel bursting with energy.	4.8	5	1.283
EE2 - At my job, I feel strong and vigorous.	4.87	5	1.234
EE3 - I am enthusiastic about my job	5.33	6	1.237
EE4 - My job inspires me.	5.12	6	1.443
EE5 - When I get up in the morning, I feel like going to work.	4.78	6	1.532
EE6 - I feel happy when I am working intensely.	5.01	6	1.354
EE7 - I am proud of the work that I do.	5.7	6	1.312
EE8 - I am immersed in my work.	5.31	6	1.34
EE9 - I get carried away when I am working.	5.01	6	1.252
Cronbach's Alpha 0.906			
SWB1 - In general, I consider myself:	5.47	6	1.084
SWB2 - Compared to most of my peers, I consider myself:	5.08	6	1.212
SWB3 - Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?	4.62	6	1.405
SWB4 - Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describes you?	5.15	6	1.615
Cronbach's Alpha 0.801			

Note. N=230; SD = Standard Deviation. POSE - Perceived Organizational Support Toward the Environment; EE – Employee Engagement; SWB – Subjective Well-being

Source: Author's elaboration

## 5. Results

The global evaluation of the structural model is considered to be acceptable, as from the seven recommended indices to test the fit of the model: only one (GFI) displayed a bad fit to the model, another one (PGFI) which had a reasonable fit, whilst the remaining five indices had a good fit. The values for the indices are reflected on Table 5.1:

**Table 5.1**

*Fit indices of the structural model*

$\chi^2$	$\chi^2/df$	CFI	PCFI	RMSEA	GFI	PGFI	TLI	SRMR
247.971	1.879	.942	.813	.062	.889	.686	.933	.119

*Source: Author's elaboration*

Perceived Organizational Support Toward the Environment showed a positive significant effect on Employee Engagement ( $\beta = .251$ ,  $p = .001$ ), confirming H1. Contrarily to what was expected, the direct effect of Perceived Organizational Support Toward the Environment on Subjective Well-being was not significant ( $\beta = .048$ ,  $p = .508$ ), thus rejecting H2. Regarding the effect of Employee Engagement on employee Subjective Well-being, and according to what was expected, it exerts a positive significant effect on employee Subjective Well-being ( $\beta = 0.454$ ,  $p < .001$ ), therefore, H3 was confirmed, as reflected in Table 5.2.

In sum, the results show that the Perceived Organizational Support Toward the Environment explained six percent of variance to Employee Engagement. The global model explains 22 percent of employee's Subjective Well-being, as expressed in Figure 5.1.

**Table 5.2**

*Path estimates for the effects*

H	Path estimate	Confirmation	$\beta$	Z - value
H1	POSE $\rightarrow$ EE	Yes	.251*	.051
H2	POSE $\rightarrow$ SWB	No	.048**	.062
H3	EE $\rightarrow$ SWB	Yes	.454***	.111

Note. H1 - Hypothesis 1; H2 - Hypothesis 2; H3 - Hypothesis 3;  $\beta$  = Factor Loading.

POSE - Perceived Organizational Support Toward the Environment; EE – Employee Engagement; SWB – Subjective Well-being.

\*  $p = .001$

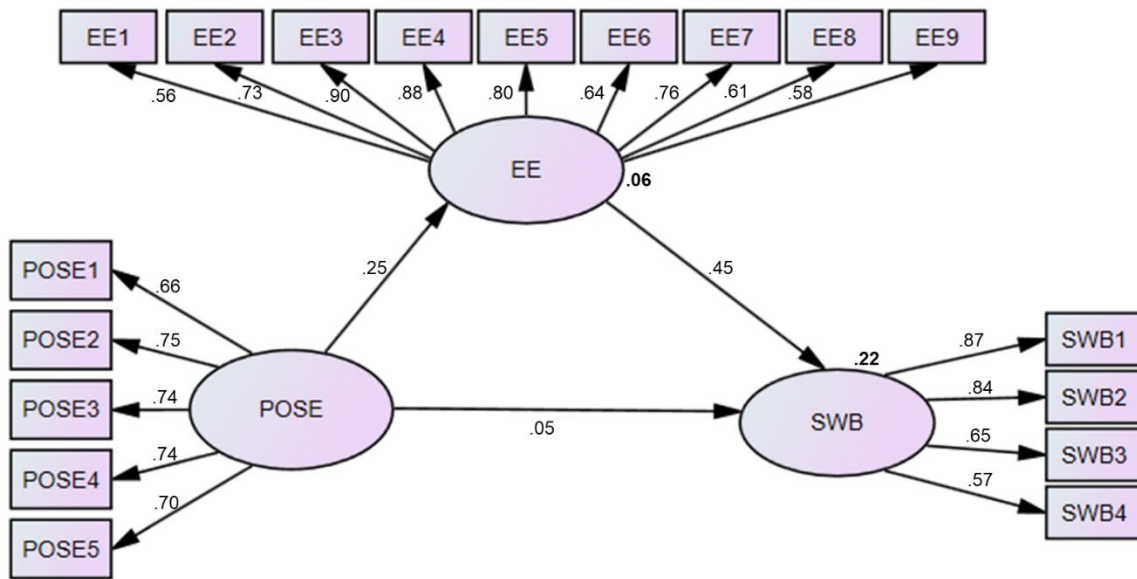
\*\*  $p = .508$

\*\*\*  $p < .001$

*Source: Author's elaboration*

**Figure 5.1**

*Standardized coefficients of the structural model*



Source: Author's elaboration

## 6. Discussion and Conclusion

### 6.1 Discussion and key findings

One of the research objectives was to determine to which extent Perceived Organizational Support Toward the Environment influenced employees' Engagement levels. The results obtained in the present research show that the hypothesis related to this research objective, H1, is confirmed. Meaning that Perceived Organizational Support Toward the Environment had a significant positive effect on the employee's Engagement levels, with a magnitude of ( $\beta = .251, p = .001$ ) on Employee Engagement.

This result allows to state that the more an employee holds specific beliefs on how much the organization they work for values their contributions toward sustainability, the greater are the Engagement levels displayed, thus leading those employees to develop and nurture a positive fulfilling, work-related state of mind namely characterized by vigor, dedication and absorption. This result may be explained by five key theoretical and other rather practical evidences, namely:

Firstly, and as stated in the literature review chapter, the Organizational Support Theory may support the result obtained. It contends that when organizations care and value their employees' contributions and well-being, those employees' perceptions towards the

organization improve, therefore ending up leveraging and developing higher engagement levels amongst the workforce.

Secondly, some characteristics related with the work context, in particular, the support shown by the organization concerning the climate and environmental aspects as well as the employee's perception that the organization values and cares about them and the level of trust that the organization has in the employee will influence the way the employees act in and outside the workplace, thereby influencing their state of mind, leading it to reach higher levels than otherwise.

Thirdly, it has been demonstrated (Lamm et al., 2014) that the construct of Perceived Organizational Support Toward the Environment positively impacts psychological empowerment of employees who value environmental sustainability, as well as other work outcomes. Accordingly, and considering that 88% of the sample stated that, outside the workplace they engage in sustainable practices, it is plausible to state that this sample values environmental sustainability, thus being more impacted by the Perceived Organizational Support Toward the Environment effect on Employee Engagement, rather than those employees who are not as aware to such matters.

Fourth, the vast majority of the respondents (73%) was aged between 20 and 29 years old, thus, probably being naturally more aware to environment-related aspects. Namely due to the cultural differences that exist among younger and older generations. Thereby, it is possible to infer that, engagement levels amongst younger employees, may be more impacted by the Perceived Organizational Support Toward the Environment.

And lastly, the fact that 94% of the respondents report to have superior education degrees (Bachelor's Degree, Master's Degree or Doctoral Degree (PhD) or higher), may mean, just as in the previous inference, that these people are supposedly more aware and educated to these matters, thereby their engagement levels may be more easily impacted by a higher Perceived Organizational Support Toward the Environment than for people without superior education degree, whom may not be as cultured.

The second research objective of the present study was to determine to which extent Perceived Organizational Support Toward the Environment influences Employees' Subjective Well-being levels. Contrarily to what would be expected, the results did not reflect the hypothesized relationship (H2). Meaning that there is no direct significant positive effect from Perceived Organizational Support Toward the Environment on employees' Subjective Well-being. In other words, the results show that although employees perceive that their organization values their contributions toward sustainability, it will not directly influence their Subjective Well-being levels. One relevant insight that may be drawn from this result is that,

Perceived Organizational Support Toward the Environment, alone, does not impact employees' levels of Subjective Well-being, however, the possibility of an indirect impact of the former construct in the latter should not be disregarded. The fact that this result rejects H2, may be explained by three key theoretical and practical aspects:

Firstly, research on this field suggests and proposes the possibility of an organization's green management policies and practices impacting employees' attitudes and well-being.

Thereby, at this stage it is important to point out that the results obtained diverge from already established theories and research that hold that there are positive relations between constructs such as Perceived Organizational Support Toward the Environment and employee and work outcomes.

Secondly, nowadays, employees want to feel that their job is meaningful and tend to find reassurance for this by looking for what their organizations are doing for them at the individual level, but also in what the organization does for the society as a whole, namely for the environment (Lamm et al., 2014). Accordingly, and from a different perspective, the result may be explained by the fact that 40% of the respondents are working in their current organization for less than a year, which may mean that they are not yet aware or may not have realized yet how much the organization values their sustainable contributions, thus not displaying a direct effect on these employees' Subjective Well-being. To reinforce the previous statement, it is known that 82% of the respondents are working in their current organization for between one and five years. Thus, once more, they might not yet perceive that their organization values their contributions toward sustainability, hence Perceived Organizational Support Toward the Environment not directly impacting these employees' Subjective Well-being.

Finally, and still in line with the previous argument, nearly half of the sample (48%) answered "I don't know" when asked about if their organization had any sustainability-related certification. Whether these are employees who are not alert for sustainability topics and, in this case their Subjective Well-being levels would not be impacted as otherwise. Or, the organization they work for is not communicating effectively, which in turn may be perceived by the workforce as not valuing or not caring about environmental issues, and then, once again, ending up not influencing Subjective Well-being levels.

The last research objective was to determine to which extent Employee Engagement influences Employees' Subjective Well-being levels. The results obtained in the present research show that the hypothesis linked to this research objective, H3, was confirmed. Meaning that Employee Engagement had a significant positive effect on the employee's Subjective Well-being levels, with a high magnitude of ( $\beta = 0.454$ ,  $p < .001$ ) on Subjective Well-being.

This result allows to state that the higher the Employee Engagement levels, the greater the Subjective Well-being. The more positive the state of mind of the employee and the higher the vigor, dedication, and absorption levels, the greater the levels of Subjective Well-being. This result may be explained by three theoretical and other two rather practical evidence:

Firstly, the results obtained seem to be innovative and ground-breaking, as there is no robust empirical evidence demonstrating the relationship between the two constructs (Ibrahim et al., 2020). However, there are previous thoughts and reflections that may corroborate the results obtained. It has been suggested that “changing one's intentional activities may provide a happiness-boosting potential that is at least as large, and likely much larger, than changing one's circumstances” (Lyubomirsky et al., 2005, p. 123). This perspective had been previously resonated by Dalai Lama who stated that “happiness is determined more by the state of one's mind than by one's external conditions, circumstances or events” (Lama et al., 2003, p. 1).

Secondly, in previous research it was already identified a positive direct relation between Employee Engagement and employees' psychosomatic and mental health (Demerouti et al., 2001; Schaufeli et al., 2008). Such evidences plausibly reinforce the results obtained, as both psychosomatic and mental health are likely to impact how an individual distorts information and how they respond to it.

## 6.2 Conclusion

The present study aimed to determine three key research objectives, which focused on determining to which extent constructs as Perceived Organizational Support Toward the Environment impact Employee Engagement and Subjective Well-being. Determining the potential positive effects that Employee Engagement has on Employees' Subjective Well-being levels was also one of the three objectives. From the research conducted, it is possible to draw four key conclusions:

Firstly, it was possible to verify a positive direct effect of Perceived Organizational Support Toward the Environment on Employee Engagement. The validation of such relationship allows to state that, the more an employee holds specific beliefs on how much the organization they work for values their contributions toward sustainability, the greater will be the Engagement levels displayed. Thus, it is possible for organizations to increase and leverage the employees' levels of Employee Engagement by valuing and appreciating their contributions toward sustainability.

Secondly, it was not possible to verify a direct relationship between Perceived Organizational Support Toward the Environment and employees' Subjective Well-being. Therefore, the employees' levels of Subjective Well-being do not tend to increase when those workers display greater levels of Perceived Organizational Support Toward the Environment.

Thirdly, it was concluded that Employee Engagement had a significantly strong positive effect on the employee's Subjective Well-being levels. From the research it is now possible to state that, in fact, organizations are able to increase the employees' Subjective Well-being levels through the promotion of Employee Engagement.

Lastly, the hypothetical model designed showed a good adjustment, allowing to explain 22% of employees' Subjective Well-being variance. Thereby, organizations may be oriented to promote and nurture sustainable practices knowing that it will positively impact employee and work dimensions, which will in turn have an influence on the organization's overall results.



### **6.3 Implications**

From a theoretical point of view this research offers a comprehensive attempt to identify the nature of the relationships between the constructs of Perceived Organizational Support Toward the Environment, Employee Engagement, and employee Subjective Well-being.

The present study strengthens the Theory of Organizational Support, however, it brings innovative conclusions regarding the construct of Perceived Organizational Support Toward the Environment. It allowed to conclude on the positive impact it has on the construct of Employee Engagement, adding the environmental component.

From a managerial point of view this study goes beyond what is already known about the positive outcomes arising from the engagement and promotion of sustainable practices.

Firstly, with the purpose of leveraging employees' Subjective Well-being through the increase of employees' engagement levels, the implementation of a diagnosis is recommended. The diagnosis should inquire about what is important and valued by the workforce, concerning sustainable initiatives.

Conceiving an environmental Corporate Social Responsibility program, from the diagnosis results, to tackle the concerns expressed by the workforce is also a recommendation arising from the results obtained.

The positive effect of Perceived Organizational Support Toward the Environment on Employee Engagement suggests to managers and team leaders to effectively communicate the implementation of sustainable practices and initiatives to the workforce. Because, even if organizations allocate resources and invest in the implementation of environmental-friendly practices it is as important for such organizations to make their employees feel such engagement, so as to improve the way employees perceive the company and to see these efforts as genuine and well-intended. This effective communication with the workforce will cause the spread of positive word-of-mouth, thus having an impact on how potential consumers perceive the company as well.

On the other hand, it is recommended that managers regularly monitor the employees' levels of engagement and Subjective Well-being, with the purpose of assessing if the sustainable initiatives under the scope of Perceived Organizational Support Toward the Environment are perceived by the workforce as frank and genuine.

Besides the sustainable initiatives in the work-context, it is recommended that organizations extend such practices and "green" behaviors to a broader scope, namely to the personal sphere. As Subjective Well-being is a wider construct, in particular because it concerns dimensions that go beyond the work atmosphere and context.

## 6.4 Limitations

Although this research provides insights regarding the effects of implementing sustainable policies on Perceived Organizational Support Toward the Environment, Employee Engagement, and employee Subjective Well-being, there are some methodological and conceptual limitations that are worthy our attention.

Firstly, the fact that the data collection process was restricted to a limited time interval, which only allowed the observation of a relatively small sample.

Secondly, and due to the fact that the results were drawn from a convenience sample, the sample may be biased, as most of the respondents are from a young age and mostly with, at least, one academic degree.

Thirdly, it is important to note that the findings presented in the research result from the limitations inherent to the size and nature of the sample, do not permit to make generalized conclusions.

Lastly, it is relevant to highlight the fact that the data collection process took place at a time in which a significant share of the respondents was in a home-office regime. This fact may interfere with the current state of mind and emotions of the respondents, which may influence the results, namely those related to the engagement and Subjective Well-being, due to its emotional dimension.

Regarding the conceptual limitations, the hypothetical model designed, is in fact, limited as it includes a reduced number of constructs. If more potentially determinant constructs of Employee Engagement and Subjective Well-being were included, it would increase the explanatory capacity of the model, thus enriching and improving the accuracy of the conclusion set.

Some of these limitations and conditions of investigation may suggest important orientations for future research, identified in the next section.

## 6.5 Future Research

Regarding the constructs used, it is clear that the idea of the existence of other important predictors of Employee Engagement and Subjective Well-being levels, which were not considered in this study, is not excluded. Therefore, future research should seek to deepen the understanding of the effects of Perceived Organizational Support Toward the Environment through the incorporation of other constructs that may be adequate and relevant in the hypothetical model, as well as to deepen the knowledge on the employee-organization relationship and support organizations to benefit from such relationship.

In order to evaluate the relative weight of the component “Environment” on the relationships analyzed, it would be relevant to include the construct Perceived Organizational Support in the hypothetical model.

In the same logic as the previous recommendation, it would also be interesting to add to the model a construct related to the employees’ general health, comfort, and ability to participate in or enjoy life events, for instance the Quality-of-Life construct developed by the World Health Organization.

Regarding the context in which the research was developed, it would also be relevant to verify the adjustment and explanatory capacity of the model if it was tested in different contexts. For future research it would be interesting to understand if the relationships between the constructs if the model was tested in a specific sector of activity.

Finally, cross-cultural studies could also support the understanding of the Perceived Organizational Support Toward the Environment effects process, as the constructs have been developed and tested in the European setting, which reality is not always applicable to the American environment.

Therefore, future investigations may consider the above proposals in order to verify the pattern of results found, either in the framework of the proposed hypothetical model, or in other conceptual frameworks, and thus confirm and expand the conditions under which the effects of the Perceived Organizational Support Toward the Environment adopt an invariant trend.

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## Annex A



# Sustainable Practices related to Employee Engagement and Subjective Well-being

Dear Participant,

Welcome and thank you in advance for accepting to participate in this survey.

My name is Teresa Silva and I am finishing my Master's in International Management at ISCTE Business School.

Within the scope of my dissertation, under the guidance of Prof. Leandro Ferreira Pereira, this survey aims to collect information on how perceived organizational support toward the environment influences the levels of engagement and subjective well-being among employees.

To be part of this research you have to be currently employed. The approximate duration of this survey is 5 minutes.

The participation in this study is strictly voluntary. If you choose to participate, you may stop at any time without having to provide any justification. All data will remain confidential and will be used for academic purposes only. Therefore, I would kindly ask you to answer honestly and spontaneously to all the questions presented.

For any clarification on the study or additional question you may contact me through the following e-mail: [tmsas2@iscte-iul.pt](mailto:tmsas2@iscte-iul.pt) (<mailto:tmsas2@iscte-iul.pt>)

Thank you for your cooperation!



## Perceived Organizational Support Toward the Environment

In the following section, you will be asked to which degree do you agree or not with a few statements, on how you perceive your organization in different dimensions.

1. Please rate to which degree do you agree with each of the following sentences. \*

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I feel that I am able to behave as sustainably as I want to at the organization where I currently work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organization does not care about whether I behave in a sustainable manner or not.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organization provides an incentive for me to reduce the use of non-renewable resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not feel that I make a positive environmental impact through work at my organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My actions toward sustainability are appreciated by my organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Employee Engagement

2. For each of the following statements and/or questions, please select the point on the scale that you feel is the most appropriate in describing you. \*

	Never	Almost Never (a few times a year or less)	Rarely (once a month or less)	Sometime s (a few times a month)	Often (once a week)	Very Often (a few times a week)	Always (everyday)
At my work, I feel bursting with energy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At my job, I feel strong and vigorous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am enthusiastic about my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My job inspires me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I get up in the morning, I feel like going to work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel happy when I am working intensely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud of the work that I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am immersed in my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get carried away when I am working.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Subjective Well-being

3. Please rate to which degree do you agree with each of the following sentences. \*

	1. Not a very Happy person	2.	3.	4.	5.	6.	7. A very happy person
In general, I consider myself:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. \*

	1. Less Happy	2.	3.	4.	5.	6.	7. More Happy
Compared to most of my peers, I consider myself:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. \*

	1. Not at all	2.	3.	4.	5.	6.	7. A great deal
Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describes you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Would you recommend the organization you work for as a great place to work? \*

Yes

No

7. When outside the workplace do you engage in sustainable practices (e.g.: waste reduction, recycling, use reusable bags and bottles, etc.)? \*

Yes

No

8. Do you believe that environmental issues (e.g.: global warming) directly impact your life? \*

Yes

No

9. Does the company that you work for have any kind of certification? (certifications related to environmental and sustainable aspects) \*

Yes

No

I don't know

## Organization Information

10. For which of the following industries does the organization you currently work for operates? That is, what is the main product or service of your organization? \*

- Bank and Financial Services
- Insurance
- Engineering and Construction
- Health and Life Sciences
- Hotel and Tourism
- Public Administration
- Telecommunications
- Services
- Energy
- Retail and Consumption
- Logistics and Transportations
- Smart Cities
- Other Industry

11. The organization you work for is in which of the following: \*

- Public sector (e.g. government)
- Private sector (e.g. most businesses and individuals)
- Public-private organization
- Non-profit organization
- Other

12. How long has your company been in business? \*

- Less than 1 year
- Between 1 and 5 years
- Between 6 and 10 years
- Between 11 and 20 years
- More than 20 years

13. Which of the following classifications best describes the organization you work for? \*

- Microenterprise
- Small enterprise
- Medium-sized enterprise
- Large enterprise

## Sociodemographic Information

14. Age: \*

O valor tem de ser um número

15. Gender: \*

- Female
- Male
- Prefer not to answer

16. Educational Level: \*

- High School or equivalent
- Bachelor's Degree
- Master's Degree
- Doctoral Degree (PhD) or higher
- Other

17. Country where you spend the most part of your time working \*

18. Average monthly net income received during the past year: \*

- Less than 1.000€
- Between 1.001€ and 1.500€
- Between 1.501€ and 2.500€
- Between 2.501€ and 4.000€
- More than 4.001€

19. For how long have you been working for your current organization? \*

- Less than 1 year
- Between 1 and 5 years
- Between 5 and 10 years
- Between 10 and 20 years
- More than 20 years

## Annex B

### *Measurement of constructs*

Construct	Items	Scale	Author
Perceived Organizational Support Toward the Environment	I feel that I am able to behave as sustainably as I want to at the organization where I currently work.	(1) Strongly Disagree, (2) Disagree, (3) Somewhat Disagree, (4) Neither Agree nor Disagree, (5) Somewhat Agree, (6) Agree, and (7) Strongly Agree.	Five items from the (Lamm et al., 2014)
	My organization does not care about whether I behave in a sustainable manner or not. (reverse-scored)		
	My organization provides an incentive for me to reduce the use of non-renewable resources.		
	I do not feel that I make a positive environmental impact through work at my organization. (reverse-scored)		
Employee Engagement	My actions toward sustainability are appreciated by my organization.	(1) Never, (2) Almost Never (a few times a year or less), (3) Rarely (once a month or less) , (4) Sometimes (a few times a month), (5) Often (once a week), (6) Very Often (a few times a week), and (7) Always (everyday)	Nine items from the shortened Utrecht Work Engagement Scale (UWES) (Schaufeli, Bakker & Salanova, 2006)
	At my work, I feel bursting with energy.		
	At my job, I feel strong and vigorous.		
	I am enthusiastic about my job.		
	My job inspires me.		
	When I get up in the morning, I feel like going to work.		
	I feel happy when I am working intensely.		
	I am proud of the work that I do.		
Subjective Well-being	I am immersed in my work.	(1) Not a very happy person and (7) A very happy person	Four items from (Lyubomirsky & Lepper, 1999)
	I get carried away when I am working.		
	In general, I consider myself:		
	Compared to most of my peers, I consider myself:		
	Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?	(1) Not at all and (7) A great deal	
	Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describes you? (reverse-scored)		

*Source: Author's elaboration*