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Master's in Management
Chair of Organizational Design**

**“Gender Diversity and Employee
Engagement: The Mediating Role of
Organizational Citizenship Behaviour”**

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Introduction

In the organizational behaviour field, the study of diversity and its influence on employees' attitudes and behaviours has become a topic of increasing relevance. Among the different dimensions of diversity, Gender Diversity has gained academic and managerial attention, as it offers the opportunity to face the challenges related to equality, while increasing organizational performance.

This study aims to clarify the complex relation existing between Gender Diversity, Organizational Citizenship Behaviour (OCB) and Employee Engagement, investigating if OCB may act as a mediator mechanism that explains how diversity favours higher levels of engagement.

Chapter One presents the central topics of the study, Gender Diversity, Employee Engagement and OCB. It first highlights the growing relevance of diversity in the academic and managerial debate, also exploring its theoretical and empirical development, as well as the regulatory framework that have contributed to increase the attention on this topic. The chapter also discusses the expectations of stakeholders, and the challenges related to the gender pay gap and underrepresentation of women in top management positions. Subsequently, the evolution of Employee Engagement and its critical role in today's environment is explored. Finally, the concept of OCB is presented as a set of discretionary behaviours.

Chapter Two lays the theoretical foundations of the research presenting a review of the existing body of literature on Gender Diversity, Employee Engagement and OCB in organizations. Both the single variables and the relationships between them are presented in order to provide a deep understanding of the topic and formulate the consequent hypotheses.

Chapter Three illustrates the methodological framework, describing the data collection process through a survey of 327 respondents and the analytical techniques employed to test the hypotheses. The results of the empirical analysis are then presented, providing the insights into the relationship between the three variables of interest and highlighting the mediation role performed by OCB. Moreover, the analyses repeated using external indexes to measure Gender Diversity are presented.

Finally, the last Chapter discusses the findings, underlining both theoretical and managerial implications. The chapter also acknowledges the limitations of the study and suggests avenues for future research.

The study aims to contribute meaningfully to both academic debate and practical implications. From an academic perspective, it enriches the literature by proposing and testing the role of OCB as a mediator variable between Gender Diversity and Employee Engagement, which represented a gap in the existing body of literature. For the practical implications, it underlines the importance of overcoming the mere symbolic representation of women and compliance with legislations, and the necessity to foster inclusive practices and strategies to overcome the existing structural barriers and promote engagement through a culture of collaboration and organizational citizenship.

Chapter 1: An overview of the research

Over the last 25 years Gender Diversity has become increasingly important in the academic and managerial debate. The interest has grown in recent years, both from a theoretical and empirical perspective, and many research and studies have been carried out to understand the dynamics and the impact of gender diversity in organizations.

Companies have begun to pay attention to the topic because of national and international regulations, such as the introduction of gender quotas' law, and the growing awareness of the potential value of gender diversity within teams. The collaboration between men and women has been proven capable of generating new ideas, enhancing decision-making and increasing performance. In research, this concept is often associated with the idea of inclusiveness and the promotion of a work environment where different perspectives, skills and leadership styles can lead to higher productivity.

Moreover, stakeholders have started to pay more attention to this aspect, expecting greater commitment from companies. Pressure from investors, institutions and consumers has driven organizations to foster diversity, equity and inclusion and to embed them into their corporate culture.

Nevertheless, there are still considerable gaps to be filled, both in terms of gender pay gap reduction and female representation in top management positions. The existing disparities continue to fuel the debate, stimulating new studies and research.

Another topic of strategic relevance in the organizational context is Employee Engagement, since the fast-changing dynamics and the uncertainty that characterize today's working environment influence considerably the ability of organizations to attract, motivate and retain employees, which represents a key competitive factor. Engaged employees tend to be more loyal, productive, healthy and proactive, making engagement not only desirable, but a critical driver of long-term organizational success.

Financial rewards and promotions have represented the main levers to increase engagement for a long time; nonetheless, today's reality is more complex, and these levers appear not enough to avoid increasing levels of disengagement.

Numerous organizations are facing problems to engage their workforce due to poor communication, ineffective leadership, misalignment between individual and company values and difficulties in ensuring an acceptable work-life balance, especially employees working in remote or hybrid settings. Other factors contribute to the reduction of employee motivation, such as the lack of recognition, limited growth opportunities and a toxic corporate culture.

Furthermore, employees' attitudes toward work are being reshaped by the increasing concern related to mental health and emotional well-being. An environment where stress and pressure are dominant, and individual needs are not addressed, is considered psychologically unsafe and can significantly reduce engagement.

The COVID-19 pandemic has reshaped the way of working: companies all around the world have shifted to remote work, adopting digital tools and new routines to ensure continuity. This change has brought lasting implications in terms of logistics, but also in how employees perceive their job, their organization and their well-being.

This shift has offered and still offers greater flexibility and autonomy, but it also poses new challenges, such as a reduced team cohesion, blurred boundaries between working and personal life and weakened emotional ties to the organization.

The consequences include a global decline of employee engagement, reaching its lowest point in over a decade. Particularly remote workers have reported feeling disconnected from both their organization and their job responsibilities.

In this context, a phenomenon that has gained increasing attention is the so-called “quiet quitting”. This refers to the passive withdrawal of employees, who feel dissatisfied or disengaged and limit their efforts to the minimum requirements of their roles, without formally resigning. The increase of this behaviour appears to be linked to a broader phenomenon of re-evaluation of personal priorities, that has expanded after the pandemic, as individuals have given greater value to the work-life balance and personal well-being.

Consequently, organizations must compare with the challenge of stimulating sustainable employee engagement in this post-pandemic context. To do that, strategies that support flexible working conditions and promote a healthy work-life balance are necessary. Moreover, the employment of managers and leadership figures able to recognize and reward employee contributions, reinforcing a culture of psychological safety and appreciation, is essential to achieve the objective.

Additionally, the erosion of engagement has also coincided with a decline in mental health and well-being. Since 2020 life evaluations have worsened and the levels of anxiety and stress have risen considerably, reaching historic highs especially among Gen Z and younger Millennials. This poses a new set of challenges for managers, who need to learn how to promote psychological safety, building trust and fostering belonging within divided teams.

The failure in recognizing and addressing these new realities leads to the risk of employee alienation and loss of talents. In contrast, investments in inclusive leadership, open communication and employee-centred engagement strategies leads to the success of organizations.

Companies must adopt a holistic approach to engagement, integrating emotional, social and ethical dimensions. In this sense, Organizational Citizenship Behaviour (OCB), defined as a form of discretionary behaviour that goes beyond formal job duties and contributes to the functional well-being of organization, represents a behavioural expression of a healthy and inclusive organizational climate.

OCB includes actions such as helping colleagues, being flexible, volunteering for extra tasks and showing initiative. These behaviours are not formally rewarded, but they play a critical role in fostering trust, collaboration and sense of community across teams. Several studies have shown that OCB is strongly

influenced by how employees perceive their organizational environment, including the degree of fairness, inclusiveness and psychological safety.

On these bases, Gender Diversity may have an indirect impact on Employee Engagement by fostering conditions that encourage OCB. When individuals perceive their organization promotes gender equality and meritocracy, valuing different voices, they may feel more included, motivated and inclined to engage in pro-social behaviours. In contrast, when diversity is poorly managed, it can lead to demotivation, mistrust and disengagement. Thus, understanding the mechanism through which Gender Diversity influences Employee Engagement is fundamental to design effective HR strategies. The study of the mediating role of OCB can explain how inclusive policies and cultures translate into individual motivation and better performances.

The following research is aimed at investigating the relationship between these three elements to understand the implications and the possible strategies to be applied in order to engage employees and make them feel safe in today's context. In particular, the objective is to provide an answer to the following question: *Does Gender Diversity have a positive impact on Employee Engagement? Is this effect mediated by OCB?*

Firstly, a literature review is carried out to provide the theoretical foundations and an overview of previous findings. Secondly, an empirical study is performed to investigate the relation between Gender Diversity, Employee Engagement and the mediating role of OCB, collecting data from a sample of 327 employees, and performing statistical testing.

The results obtained confirmed the hypotheses of the current research, indicating that both Gender Diversity and OCB have a positive and significant impact on Employee Engagement and OCB mediates the relation between the two variables. In the final chapter these results are discussed, along with their implications for theory and practice.

Chapter 2: Literature Review

2.1. Gender Diversity

During the last two decades, Gender Diversity has become an increasingly important concept within organizations, that are facing the increasing pressure coming from interest groups and government initiatives to achieve a balanced gender ratio and include more women in their boards. This increasing importance is testified by the considerable increase of scientific papers' publications on gender balance: in 2009 there were around 11 published articles, while in 2019 this number grew to 280 articles (Sánchez-Teba et al., 2020).

The expression Gender Diversity refers to the proportional representation of different genders across various positions and hierarchical levels within the organization (Brieger et al., 2019). Three key dimensions are related to it: representation, referring to the numerical distribution of men and women across organizational hierarchies; inclusiveness, indicating the organization's effort to create an environment in which all genders feel valued and respected; equal opportunities, referring to the fair provision of career development and leadership roles regardless of gender (ENoLL, 2022).

The existing differences between men and women in the workplace refer to various aspects, such as the gender pay gap between employees of different gender performing the same role, the underrepresentation of women on organizations' boards compared to men, and the persistence of stereotypes, whereby men are typically associated with attributes like strength and leadership, while women are often linked to altruism, collaboration, and gentleness.

The research exploring this topic has highlighted multiple reasons for incorporating more women members in organizations, mainly related to the contribution of new perspectives and different values in the decision-making process (Byron & Post, 2016; Wieczorek-Szymanska, 2020).

Gender diversity is not only a moral and social issue within organizations, but it also has a significant influence on economic performance. In today's global business environment, companies cannot achieve competitive advantage by overlooking 50% of the current and potential workforce, as stronger leadership is essential for building better businesses (Gant, 2019). Gender diversity has become a top priority to achieve organizational growth, that cannot be further ignored.

Another important criticality is that when teams are too homogeneous, they may ignore relevant alternatives and reinforce their own members' biases in the decision-making process. Diversity has the potential to bring different perspectives, highlighting different unsatisfied needs and the sensitivity of a firm towards this issue has been proved to be useful in attracting top talents (Azmat & Boring, 2020).

Nowadays, organizations have begun to understand the potential of gender diversity and to find strength in it. To manage and enhance this potential, different models and strategies are being developed.

The presence of women on corporate boards was examined by Elgart (1983), who forecasted that, on the basis of the 10-year growth in the rate of women directors, it could have taken up to 200 years for women to reach equal representation in top boardrooms.

Kesner (1988) examined 250 Fortune 500 boards across 27 industries and attributed the underrepresentation of women on corporate boards to a lack of experience (Kesner, 1988). This point of view was challenged by Bilimoria and Piderit in 1994, which found evidence of systematic sex-based bias against women's membership on boards of directors, through an analysis of 300 Fortune 500 companies (Bilimoria & Piderit, 1994).

Several theoretical perspectives attempt to explain the persistent barriers to women's advancement to director-level positions, and a wide range of internal and external factors continue to affect board gender diversity.

The so-called "glass ceiling" is an important metaphor within this topic, that explains the inability of women to advance after a certain point of their careers, regardless their qualifications and achievements. It has been defined as "*a transparent barrier that keeps women from rising above certain level in corporations*" (Morrison et al., 1987, p. 13). This concept has evolved since this first definition and has become central in discussion over the status of women in management (Zimmer, 2015) and to explore the possible impact on organizational effectiveness.

The causes of the "glass ceiling" have been divided into two different groups: those attributable to the characteristics of the female stereotypes and those to the socio-cultural aspect (Arkfen et al., 2004).

The first category concerns women personality, abilities and the typical behaviours (Karsten, 1994). The latter refers to the internal dynamics of organizations and to the attitude of employees, who prefer to be headed by a male leader due to a cultural phenomenon (Bartol, 1978).

It is important to understand that this concept does not refer to all the gender disparities, but to the artificial barriers to the advancement of women and minorities (Federal Glass Ceiling Commission, 1995).

According to Cotter, Hermsen, Ovadia and Vanneman (2001) there are four criteria that can be applied to distinguish the concept of "glass ceiling" from the other types of inequalities: firstly, it is an inequality that can't be explained by any other job-relevant characteristics of the employee; secondly, it has to be greater at higher levels of an outcome than lower ones and, thirdly, it represents an inequality in the chances of advancement into higher levels, not only in the proportions of employee covering a certain level. Finally, it increases over the course of the career (Cotter et al., 2001).

This concept was revived by Saleem, Rafiq and Yusaf (2017) in their research, to identify the obstacles faced by women in rising up the organizational levels and to determine how this concept of the "glass ceiling" leads to the unequal representation of women in high-level position compared to men. The results confirmed the existence of the glass ceiling phenomenon in the Asian context especially with regard to the selection and promotion of female candidates. Additionally, the study proved the negative relation between glass ceiling and women effectiveness. Competitive women members must be considered in the selection and promotion

decision making to gain positive effects and to drive economic growth. To achieve this objective equal employment policies are useful, but still not enough. Societies need to change their stereotypes attitudes toward women and encourage them to use their potential (Saleem et al., 2017).

Navjeet Kavur and Pallvi Arora (2020), in their study investigated the different aspects of gender diversity and inclusion, focusing specifically on Indian organizations. In this research, diversity has been defined as “*the existence of differences among employees in the workplace, based on gender, age, color, social class*” (Kavur & Arora, 2020; p. 125). The main questions addressed in the paper concerns the influence that diversity and inclusion may have on organizations, both in terms of growth and other impacts. These questions were answered through a systematic literature review. They found consistent evidence of the potential of gender diversity and inclusion to improve organizational performance in terms of cost reduction, talent management, reputation, innovation and creativity, decision-making, as well as the relationship between these aspects and employee empowerment.

Fine, Sojo, & Lawford-Smith (2020) provided an extensive review of the literature on gender diversity, allowing for a deeper understanding of the various aspects of the topic and the multiple perspectives through which its importance can be interpreted. The authors defined gender diversity as the balanced and inclusive representation of different sexes within the workplace. They clarified that, although some biological and psychological sex differences exist, these are often modest and strongly influenced by social context. Therefore, differences between men and women are not sufficient to justify occupational segregation or assumptions about vocational suitability based on gender.

From a justice perspective, the study emphasized that promoting gender diversity in the workplace is primarily a matter of fairness and social equity. Employment is not only a source of financial livelihood, but also a mean to achieve personal growth, social contribution, community, and recognition.

Consequently, discrimination in access to work and leadership roles denies women significant benefits that can be achieved through job and reinforces sociopolitical and economic disadvantages. Additionally, a more gender-diverse workplace can actively contribute to reduce sex-based discrimination and harassment and challenge the androcentric biases.

From an organizational perspective, the research claims that gender diversity brings benefits to companies. While the existing evidence in literature related to improved team and firm performance is complex and sometimes inconclusive, there is stronger support for positive effects on occupational well-being, innovation and corporate governance. A more gender-diverse environment is associated with healthier workplaces, lower rates of harassment and turnover and higher ethical standards in management. Furthermore, increasing female representation, particularly at leadership levels, has been linked to higher consideration of stakeholders’ needs and more socially responsible corporate behaviour (Kulik & Metz, 2017).

In conclusion, Fine, Sojo, and Lawford-Smith (2020) argue that gender diversity initiatives should not rely exclusively on the expectation of business gains. Instead, they advocate for an integrated approach that combines ethical imperatives with an evidence-based understanding of organizational benefits.

Gender Diversity in organizations is also strongly related to aspects like sustainability, which is a hot topic in today's context given the importance attributed to this aspect to guarantee a future to the next generations, creativity and productivity, considered fundamental for companies to gain approval from their stakeholders and competitive advantages over other companies.

The relation between gender diversity and sustainability performance has been investigated in the research conducted by Singhania et al. (2023). They proved the existence of a positive relationship between these two dimensions, through a study conducted in India: the findings suggested that an increase in the percentage of women directors and number of independent women directors on boards is more than likely to lead to an increase of the sustainability reporting quality.

Similar results have been achieved by other authors, for example it has been found that the voluntary climate change disclosure increases together with the increase of women percentage on boards (Ben-Amar et al., 2017).

The impact of gender diversity on creativity is another aspect that has been widely studied, but it still represents a topic of debate due to the different findings achieved by researchers. The two different types of diversity, namely functional, referring to teams composed by members from different organizational functions, and observable diversity, referring for example to gender, age, racial diversity, may affect creativity differently (van Knippenberg & Schippers, 2007): functional diversity has been found to have both a positive (Mitchell & Boyle, 2015) and a negative (Cabral et al., 2008) effect on creativity.

On the other hand, status conflict has been found to have a negative influence on team creativity, since it undermines team psychological safety; this negative effect is less likely to be materialized in teams characterized by gender diversity (Lee et al., 2018). This finding implicates that the presence of gender diversity within organizations and teams is expected to promote a more psychologically safe environment, fundamental to achieve creativity.

As above mentioned, Gender Diversity is a variable that affects organizational performances under multiple perspectives, namely financial, productivity, sustainability, decision making. Consequently, its management and enhancement play a critical role in the organizational overall strategy for the achievement of successful outcomes. Hubbard (2012) referred to the concept of diversity as the variety of differences and similarities among individual that, if correctly leveraged, contributes to the achievement of organizational goals and defined diversity management as the *“process of planning for, organizing, directing, and supporting these collective mixtures in a way that adds a measurable difference to organizational performance”* (Hubbard, 2012; p. 8).

Effective diversity management encompasses practices like fair promotion and compensation systems across different groups, diversity training for employees and managers and the active monitoring of pay and career advancement equality. Leveraging on these strategies is fundamental for organizations to promote a culture of diversity, inclusion and respect among employees.

2.2. Gender Diversity and Employee Engagement

Employee Engagement is an aspect that, if correctly managed, may help organizations to gain competitive advantage over others. The human capital of an organization is its most valuable asset, that cannot be replicated by the competitors.

This concept was firstly introduced by Kahn (1990, p. 694), who defined it as *“the harnessing of organization members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances”*. This definition encompasses three different dimensions for an employee to be rightly engaged, which are the meaningfulness of his work, the safety, referring to feeling comfortable enough to be one’s authentic self at work without fearing negative consequences, and availability, that is related to the possession of the physical, emotional and psychological resources needed to perform the work effectively. This conceptual framework was later adopted by Rich et al. (2010), who contributed to a better understanding of the psychological roots of work engagement, identifying value congruence, perceived organizational support and core-self evaluations as its antecedents, that exert a unique and equally strong influence on it. Subsequently, they considered the degree to which engagement represents a mechanism through which its antecedents impact job performance and demonstrated that it mediates the relationship between the antecedents and outcomes better than other mediator variables, such as job satisfaction or motivation.

Other significant definitions include the one of Hewitt Associates LLC (2004, p. 222), who defined employee engagement as *“the state in which individuals are emotionally and intellectually committed to the organization or group, as measured by three primary behaviors: say [...], stay [...], strive [...]”*, and that of Schaufeli and Bakker (2010, p. 22), who defined work engagement as *“the psychological state that accompanies the behavioural investment of personal energy”*.

The above cited definitions depict the figure of the engaged employee as someone who feels passionate about the organizational goals and is intellectually and emotionally bound with the organization.

Gallup (2002) identified three different types of employees: engaged, not engaged and actively disengaged. The first category refers to those who are passionate about their job and strive to reach excellent results. The second category encompasses the ones who focus on the tasks assigned to them, instead of the organizational goals, and do what they are told to. Finally, the third type is referred to employees who do not perform well and furthermore they actively work against organization’s goals.

During the years, maintaining the workforce engaged has become a priority for organizations, since the disengagement phenomenon is rising exponentially, and employees are more demanding especially in relation to work-life balance issues. The variations in the factors affecting Employee Engagement may arise due to differences in individual or job characteristics, but also due to gender diversity. Different approaches should be included within the organizations to manage these diversities (Chandani et al.,2016). Additionally, the

drivers of engagement to take care of are many, for example environment, team relationship, well-being and compensations (Anitha, 2014).

For example, gender diversity among employees is a potential lever to improve employee engagement and lead to successful outcomes for organizations. To do that, a prosecutable strategy is the implementation of initiatives and programmes to create an effective diversity management, which contributes to the creation of an environment that fosters mutual respect among members.

In this regard, the study conducted by Tuan, Rowley, and Thao (2021) provides significant evidence. They examined how diversity-oriented HR practices influence employee engagement by cultivating a diversity climate in the workplace.

Empirical research was conducted in manufacturing firms located in Ho Chi Minh City, Vietnam, across various sectors such as automotive, chemicals, electronics, and textiles. The sample was composed by 1,174 employees and 136 managers from 31 firms, each with a minimum of 200 employees.

The findings confirmed that diversity-oriented HR practices positively influence employee work engagement, and this relationship is partially mediated by diversity climate, meaning that when employees perceive their organization as fair and inclusive, their emotional and motivational connection to work is significantly strengthened.

A similar study, investigating the relation between diversity practices and employee engagement, has been carried out by Downey et al. (2015), who hypothesized that the association between these two variables would be mediated by trust climate. The research focused on the health sector and was based on a large sample of 4,597 employees. The results confirmed the hypothesis, indicating that diversity practices are associated with a trusting climate which is positively related to employee engagement. Another aspect considered by this study was the moderation role of inclusion and indicated that the association between diversity practices and the perceptions of a trust climate vary at different levels of inclusion perception.

Along the same lines, Adam & Alfawaz (2025) investigated the connection between gender diversity, employee engagement and organizational performance in the context of Saudi Arabia, using a quantitative approach based on a sample of 1,233 employees from 19 organizations. The results revealed a positive and significant relationship between gender diversity and employee engagement and demonstrated an indirect effect on organizational performance, with employee engagement acting as a mediator. In conclusion, gender diversity fosters higher levels of engagement and commitment, which in turn positively influence overall performance.

Henriques and Carvalho (2022) conducted similar research, analysing the relationship between diversity practices and employee engagement focusing on the telecommunication sector. Their findings are in line with the previous ones, confirming the positive correlation between these two elements and emphasizing how a good management of gender diversity within the organizations has the potential to lead a higher level of engagement.

The direct relationship between gender diversity and employee engagement has been further explored by Chidi et al. (2019), through research on the cable manufacturing industry in Anambra State, which revealed the existence of a direct relationship between gender diversity and employee engagement. It concluded that a more gender-sensitive organization generates a group of engaged employees. Consequently, organizations should give equal opportunities to both genders, making the organization gender-sensitive and eliminate discrimination in the training and promotion processes of employees in order to reach positive outcomes.

These findings reinforce the idea that effective gender diversity management is not only a matter of fairness but also a strategic lever for enhancing organizational outcomes.

Based on the evidence provided by the analysed studies, that demonstrate the importance of gender diversity in fostering employees' engagement, the first hypothesis formulated for this study is the following:

H1: Gender diversity has a positive impact on employees' engagement

2.3. Gender Diversity and Organizational Citizenship Behaviour

Organizational Citizenship Behaviour (OCB), described by Organ (1988; p. 4) as the “*employees' discretionary and voluntary behaviour, which is not related to the reward system and plays an important role in promoting the organization's effective functioning*”, has become a fundamental dimension for organizations to reach better performance.

The dimensions typically associated with OCB are five: Altruism, which is the voluntary helping behaviour towards colleagues that has a positive effect on performance evaluations; Conscientiousness, which refers to going beyond the typical work requirements and leads to an increase in productivity; Courtesy, which is the mitigation of risks and avoidance of problems; Civic Virtue, which is staff participation in the enterprise's management; and finally, Sportsmanship, which refers to the tolerance without complaints in the face of suboptimal organizational situations (Organ, 1988).

Organizational Citizenship Behaviour (OCB) has attracted considerable attention over time, as its effective management is considered essential to enhance organizational performance. Indeed, the evidence collected related to the positive relation between these two variables are several (Podsakoff & MacKenzie, 1997).

Research has also looked for attitudinal factors related to the OCB's performance, for instance organization-based self-esteem (Chattopadhyay, 1999), personality factors (Organ & Lingl, 1995), justice perceptions (Moorman, 1991) and personal beliefs (Sung et al., 2023).

However, there is still much to understand about the factors that influence OCB and the ones influenced by OCB.

One issue is represented by the conflicting conclusions reached by different studies: some have found that women are typically more likely to engage in OCB across all five dimensions (Kidder & McLean Parks, 2001), while others have proved that men tend to perform more OCB overall (Lovell et al., 1999). Other studies claim that women are more associated with the dimension of altruism, while men are more inclined to engage in helping behaviours (Farh et al., 1997).

Stereotypes across several cultures, tend to associate traits like empathy, altruism, concern for others and helping to women, while men are usually seen as more ambitious, competitive and aggressive.

Kidder (2001) has examined the influence of gender, gender-orientation and gender-typed occupation on gendered OCBs. The dimensions on which the study focused are OCB-civic virtue and OCB-altruism.

The results confirmed the significant effect of gender and occupation on the performance of OCB civic-virtue, meaning that individuals with a strong feminine identity tended to demonstrate performing altruism-OCBs, and the ones with a strong masculine tended to report performing civic-virtue.

Another difference to be considered is the one between Western and Eastern countries. On the basis of this difference and considering the cultural divergence, Farh et al. (1997) developed an alternative framework of the five OCB dimensions, which considered Chinese cultural values: Altruism, Conscientiousness, Identification with the company, Interpersonal Harmony and Protection of company resources.

Gao (2020) explored the relation between gender diversity and OCB in the Chinese private sector, applying the above cited framework. The objective was to understand whether men and women exhibited different behaviours on the five dimensions of OCB.

In contrast with previous studies, which suggested that women generally exhibit higher levels of OCB, the results suggested that men tend to display higher levels of OCB across all dimensions considered.

This conclusion has been explained in terms of gender bias: women may need to work harder than men to receive equal recognition or rewards. Consequently, although women may demonstrate lower levels of OCB in certain contexts, they might excel in different environments, particularly when female leaders are also present.

The research conducted by Mousa, Massoud, and Ayoubi (2020), focused on how men and women perceive diversity management and workplace happiness in the context of public hospitals in Egypt, and investigated whether diversity management mediates the relationship between workplace happiness and OCB. The study is based on two theoretical frameworks: Social Exchange theory (Blau, 1964), which asserts that employees are motivated to contribute to the organization when they feel valued and fairly treated; and Equity theory (Adams, 1963), which suggests that employees assess fairness based on how others are treated and respond accordingly. The former explains how employees judge the fairness of managerial decision-making, while the latter supports the idea that employees are more committed to the organization when they believe the

organization. The results indicated that women perceive gender diversity management policies more positively than men, particularly in highly discriminatory contexts like Egypt. These policies foster more positive behaviours among women, contributing to higher levels of OCB. Furthermore, OCB was found to be positively correlated with workplace happiness, suggesting that higher levels of satisfaction and engagement lead to more proactive and cooperative employee behaviours. Finally, the study confirmed that diversity management acts as a mediator in the relationship between workplace happiness and OCB.

The variance in the outcomes achieved by these studies demonstrate how variables like national culture, level of discrimination and the industry upon which the study is conducted, influence the OCB.

Kark, Waismel-Manor, & Shamir, (2005), on the other hand, presented a feminist view of the concept of OCB, exploring how this concept is strongly related to gender, despite it is often defined as a gender-neutral concept, and how this relation affects both women and men.

From this perspective, the language and theory that define OCB contain many gender connotations and the authors argue that gender diversity impacts OCB within organizations, but this impact is not always beneficial for women.

The study has been developed on the basis of two theoretical frameworks: the Poststructural Feminism, used to analyse the language and metaphors embedded in the definition of OCB, and the Post-liberal perspective, that explored how gender expectations and practices in the organizations contribute to reproducing inequalities between male and female. Based on such theoretical framework, the authors argue that the above cited five dimensions related to the OCB are divided into two different groups: the first one, that encompass altruism and courtesy, is often associated to feminine behaviours, while the second one, which includes civic virtue, consciousness and sportsmanship, is associated with male behaviours.

Therefore, it can be argued that the stereotypically masculine definitions and assumptions embedded in the language limit the broader scope of organizational life and stereotypically feminine qualities, such as emotional expression and subjectivity, challenge these organizational assumptions. Hence, the study highlights the limitations of the concept of OCB and the importance of recognizing these issues. In a more equal and inclusive context, gender diversity has the potential to foster fairer evaluations and greater recognition of OCB.

After developing a comprehensive understanding of Organizational Citizenship Behaviour (OCB), exploring the potential and limitations of the concept, examining how it can be influenced by gender diversity and diversity management, the relevant dimensions of OCB, along with the impact of stereotypes and the influence exerted by the cultural context, the second hypothesis developed for this research, is the following:

H2: Gender diversity has a positive impact on OCB

2.4 Organizational Citizenship Behaviour and Employee Engagement

The relation between Organizational Citizenship Behaviour and Employee Engagement is another fundamental aspect of this study that requires further investigation and understanding. While a considerable number of studies have explored the drivers and outcomes of both aspects individually, the reciprocal influence they exert on each other remains a partially unexplored topic. More specifically, while many studies have highlighted how employee engagement can encourage extra-role behaviours such as OCB, fewer works have focused on how OCB may actively foster greater levels of engagement among employees.

As already seen, both these aspects exert a positive effect on organizational performance and managing them correctly is essential to gain competitive advantage. In this paragraph, some studies that provide evidence also of the effect that OCB has on employee engagement are presented.

The role of OCB on employee engagement has been studied by Nandal & Nandal (2023), who considered the relationship between OCB, employee engagement, and organizational effectiveness. They found that the link between employee engagement and organizational effectiveness improved as a consequence of OCB. In other words, behaviours that go beyond formal job requirements, such as helping colleagues, volunteering for additional tasks, and showing loyalty to the organization, enhance employees' sense of purpose and connection with their work, boosting their engagement. On the other hand, OCB is exposed, and organizational success is achieved through an engaged workforce.

Herwan et al. (2020) explored the relationship between OCB, employee engagement, and employee performance in the manufacturing industry of Tangerang. The main objective was to analyse whether and how OCB influences employee engagement, and if engagement mediates the relationship between OCB and employee performance. The results confirmed the significant effect of OCB on employee engagement. This means that employees who demonstrate OCB tend to be more engaged in their work. This can be explained by the fact that extra-role behaviours often rise from intrinsic motivation and a sense of belonging, which are also essential components of engagement. It was also proved that engagement acts as a mediator in the relationship between OCB and employee performance.

Along similar lines, Rasheed & Siddiqui (2023) explored how OCB influences employee engagement and empowerment, using job self-efficacy, which is the trust that a person has towards their own capacities, as a mediator of this relationship. The study investigated both individual-targeted OCB (OCBI), namely behaviours oriented towards the individual and individual involvement, and organizational-targeted OCB (OCBO), namely behaviours aimed at improving the whole organization. The findings suggested that organizations should focus on fostering individual-targeted OCB, such as helping colleagues and taking initiative, in order to enhance employee engagement. Job self-efficacy was found to be an important mediator in the relationship

between OCBI and employee engagement, meaning that employees who develop higher job self-efficacy through OCBI feel more involved and empowered in their job. Empowerment and engagement are essential to improve overall organizational performance, and organizations should work on creating an environment that encourages voluntary, extra-role behaviours.

Another interesting study by Nabiyeva (2022) studied the role of OCB in the work environment, and how this aspect contributes to the reinforcement of organizational culture, the enhancement of the psychological climate and the trust in team relationships. These positive psychological and relational conditions create the groundwork for employees to feel more engaged, committed, and motivated to contribute meaningfully to their organization's goals. The improvement in these aspects may create the conditions for a higher involvement and engagement of employees within the organization.

Based on the evidence discussed above, the third hypothesis of the current research is the following:

H3: The Organizational Citizenship Behaviour has a positive effect on Employee Engagement

2.5. The mediating role of Organizational Citizenship Behaviour

In the recent years, organizational research has focused on gender diversity, employee engagement and organizational citizenship behaviour, in order to provide useful evidence to companies that may help to achieve greater performances, not only financially.

However, the mediator role played by OCB in the relationship between Gender Diversity and Employee Engagement is an aspect that is still unexplored, representing a significant gap in the literature.

As discussed in the previous paragraphs, empirical evidence outlines that gender diversity can positively influence OCB, encouraging inclusive work environments and collaborative behaviours that go beyond the simply required tasks.

At the same time, empirical research also suggests that there is a positive relationship between OCB and employee engagement, since employees that demonstrate these behaviours tend to develop a higher psychological involvement and a stronger sense of belonging toward their job and organization.

On these bases, it is reasonable to hypothesize that OCB may not only have a direct relation with these two variables but may act as a mechanism through which the positive impact of gender diversity on employee engagement is amplified. Therefore, the fourth hypothesis of this study is the following:

H4: The positive impact of Gender Diversity on Employee Engagement is mediated by Organizational Citizenship Behaviour

Chapter 3: The empirical research

The research investigates the effect of *Gender Diversity* on *Employee Engagement* and considers *Organizational Citizenship Behaviour* (OCB) as a potential mediator of this relationship.

Gender diversity and *Employee Engagement*, as previously discussed, are two key elements in contemporary organizational research. Both have been associated with a wide range of positive outcomes and are considered critical drivers of organizational performance. Moreover, *Organizational Citizenship Behaviour* represents a potential variable through which these positive effects may be amplified.

Data were collected through a structured questionnaire that explored three main areas: (i) the level of *Employee Engagement*, examining how respondents perceive their job and the degree of effort they dedicate to it; (ii) the level of *Organizational Citizenship Behaviour*, investigating both OCB directed toward individuals (e.g., helping colleagues in need) and toward the organization (e.g., volunteering for tasks beyond formal duties); (iii) the level of *Gender Diversity* within the respondents' organizations, assessed both from a strategic perspective, such as the presence of policies ensuring gender pay equality, and a numerical perspective, analysing the representation of women across different hierarchical levels.

In this research, *Gender Diversity* serves as the independent variable, *Employee Engagement* is the dependent variable, and *OCB* is considered as the mediator. Additional control variables were included to account for potential external influences and will be presented in the following sections.

3.2 Methods

3.2.1 Sample Description

The initial sample consisted of 455 participants. After data cleaning, 96 responses were excluded due to incompleteness and an additional 31 were removed based on the initial screening questions, as they were not representative of the study sample. As a result, the final dataset used for the analysis included 327 valid responses.

Participants were recruited through multiple channels, including social media platforms, particularly WhatsApp, LinkedIn, and Facebook, as well as via direct and indirect personal contacts.

Before participating, respondents were informed about the purpose of the study and how their data would be processed. They were informed that all responses would have been treated anonymously and analysed in aggregate form, in full compliance with the General Data Protection Regulation (EU Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016). Furthermore, participants were informed of their right to withdraw from the survey at any time without providing justification.

The sample displayed a quite large age range. The youngest respondent was 22 years old, while the oldest was 66, resulting in a broad range of working experiences, from individuals who have only recently entered the working world to those approaching retirement age (**Table 1**). The mean age of the sample was approximately 50 years, with a standard deviation of about 10, indicating a fairly uniform distribution without significant peaks or outliers.

Table 1: Descriptive Statistics - Age

	N	Minimum	Maximum	Average	Std. Deviation
Age	327	22	66	49,798	9,798

The gender distribution of the sample resulted as follows: out of a total of 327 respondents, 188 identified as men (57.5%) and 139 as women (42.5%). A representation of this distribution is provided in **Figure 1**.

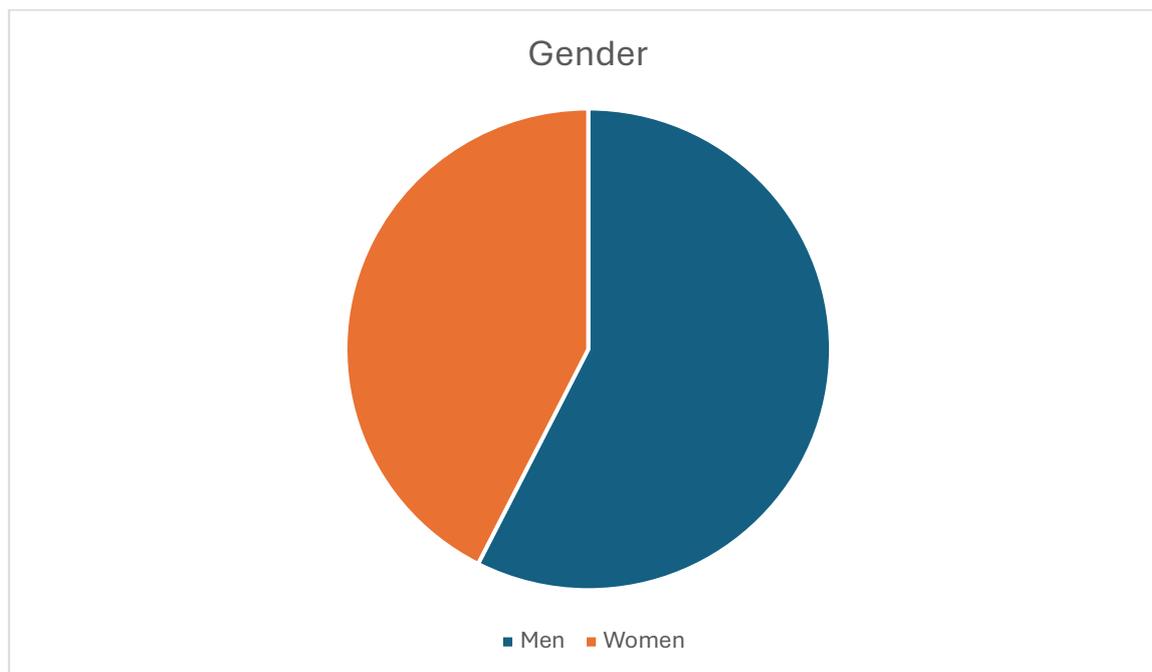


Figure 1: Gender distribution

The educational level of the respondents was heterogeneous, ranging from primary education to PhD. The largest share of participants (46.3%, n = 151) reported holding a master's degree or a Single-cycle degree. This is followed by 28.5% of respondents (n = 93) who indicated a High School diploma as their highest level of education. A total of 44 participants (13.5%) reported having obtained a PhD or other types of postgraduate specialization. Additionally, 35 respondents (10.7%) reported holding a bachelor's degree, while only 1.2% of

the sample reported having an educational level below a High School diploma. **Figure 2** provides a visual representation of the educational background of the participants.

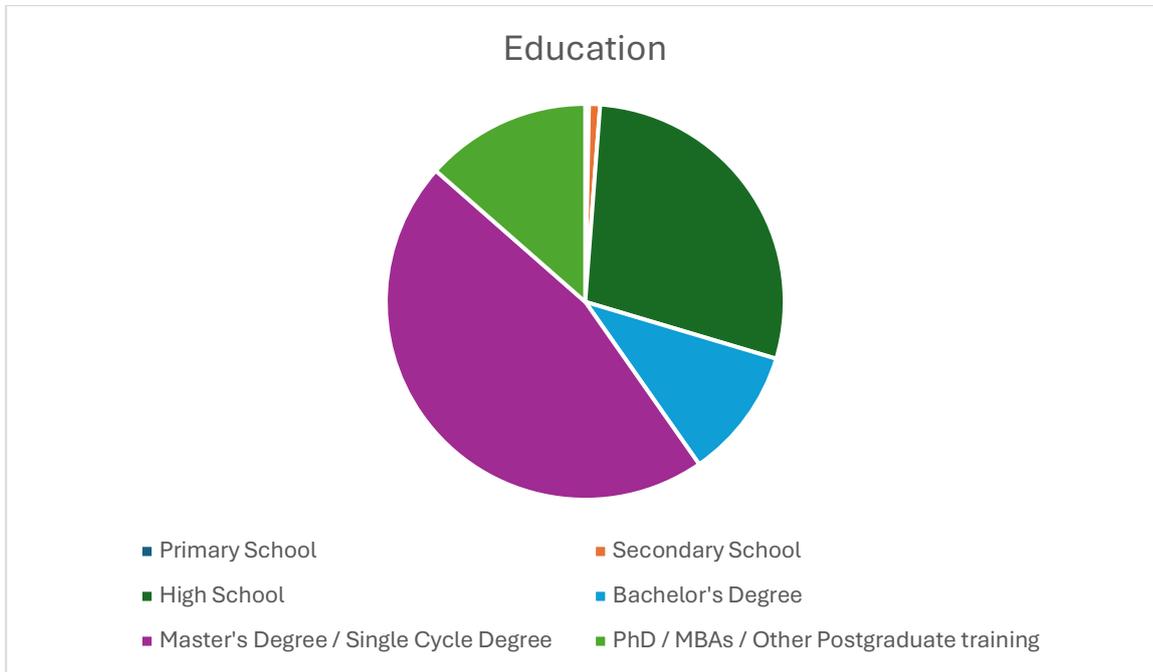


Figure 2: Educational level distribution

Regarding the industry sectors in which respondents were employed, the vast majority indicated working in the tertiary sector (88.1%, n = 288). The remaining 39 respondents were distributed as follows: 5.8% (n = 19) were employed in the secondary sector, 0.6% (n = 2) worked in the armed forces, and 5.5% (n = 18) selected "Other" as the industry of their organization. No participants reported working in the primary sector. **Figure 3** provides a graphical representation of the distribution across industries.

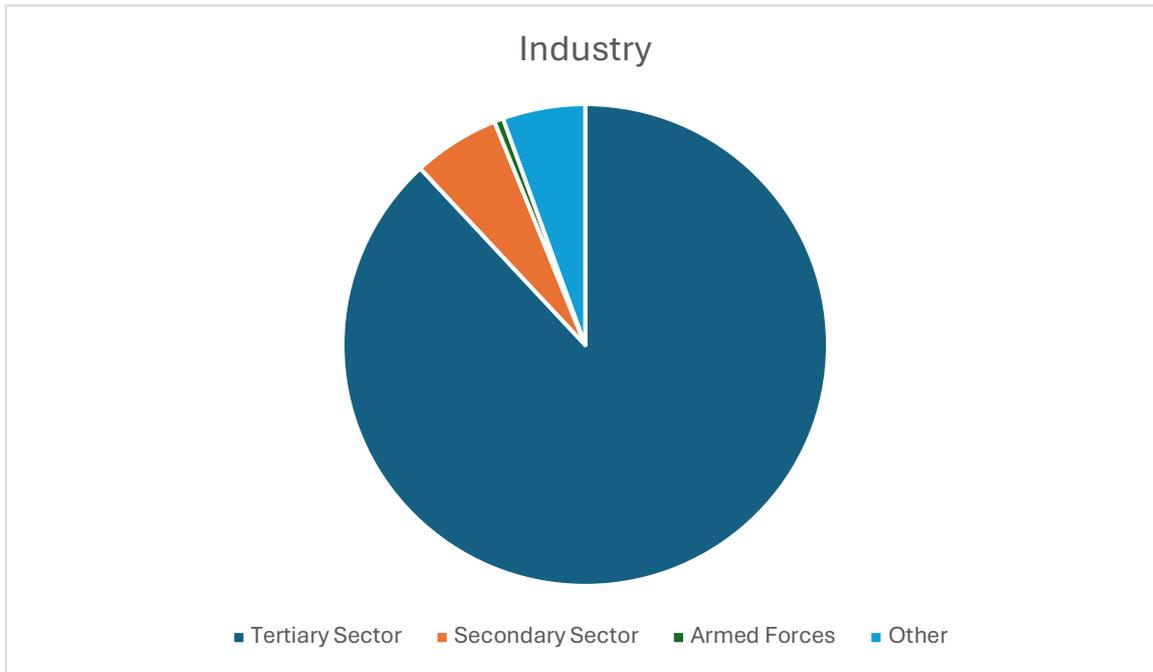


Figure 3: Industry distribution

Finally, another aspect of interest concerned the size of the organizations in which respondents were employed. The largest proportion of participants worked in multinational organizations (33%, $n = 108$), followed by those employed in large enterprises (25.4%, $n = 83$) and medium-sized enterprises (24.5%, $n = 80$). Additionally, 13.8% ($n = 45$) of respondents were employed in public administration, while 3.1% ($n = 10$) worked in small enterprises. Only one respondent (0.3%) selected “Other” as the size category of their organization, and no participant reported working in micro-enterprises. **Figure 4** provides a visual representation of the distribution by organizational size.

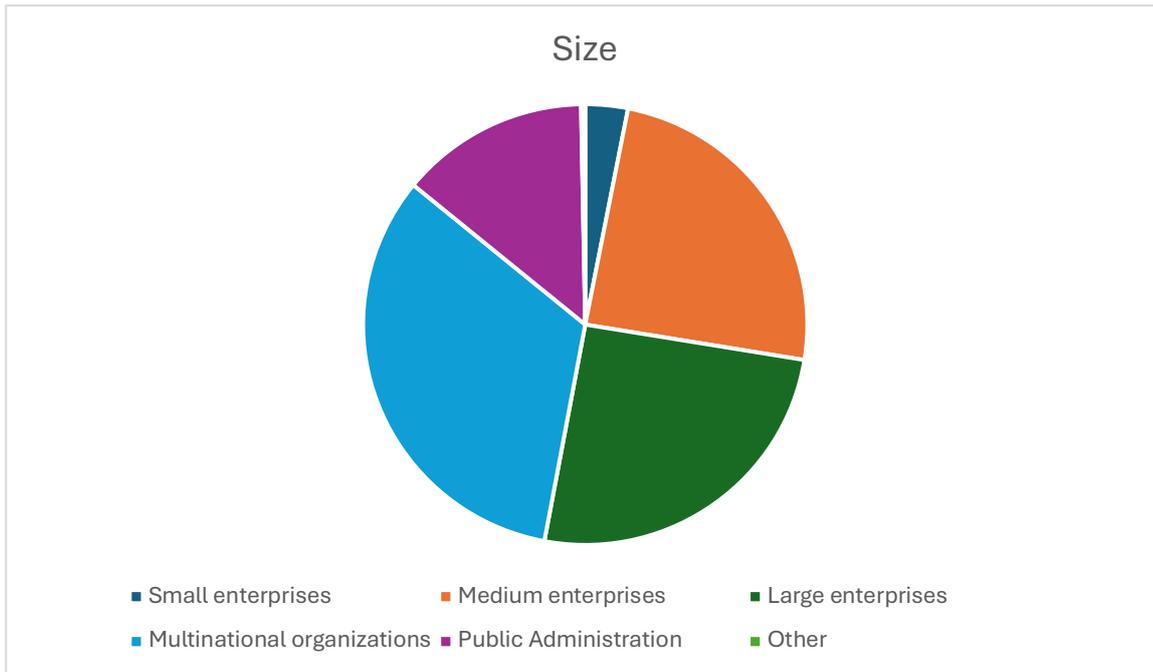


Figure 4: Size distribution

3.2.2 Questionnaire Description

The survey was designed to reach participants of diverse ages and genders, employed across a range of industries, with the objective of capturing a heterogeneous perspective on the relationship between *Gender Diversity*, *Employee Engagement* and *Organizational Citizenship Behaviour* (OCB).

The questionnaire was developed using Qualtrics, an online platform that enables users to design and distribute surveys within a single-integrated system.

The distribution of the survey was carried out through multiple channels, including social media platforms such as WhatsApp, LinkedIn and Facebook, as well as through both direct and indirect personal contacts. In total, 455 responses were collected. Following data cleaning and validation procedures, the final sample comprised 327 valid responses, as previously detailed.

To ensure the relevance and reliability of the collected data, two eligibility criteria were established at the beginning of the questionnaire: (1) respondents had to be currently employed, and (2) they could not be self-employed. These criteria were fundamental to the study, which focused specifically on the perceptions of individuals working within organizational settings. These initial questions functioned as screening items and participants who did not meet the criteria were automatically excluded from completing the survey.

3.2.2.1 General Characteristics

The survey was administrated between March 2025 and June 2025 and consisted mainly of close-ended questions, including multiple-choice items and five-point Likert scales. The only open-ended item concerned the indication of the name of the respondent's organization.

A quantitative research approach was adopted for this study and the survey, developed using Qualtrics XM, was distributed via a sharable link.

The questionnaire was structured into distinct sections. The first section included questions related to control variables, such as *Age*, *Gender*, *Level of Education* and *Marital Status*, aimed at understanding the demographic distribution of participants and facilitating the analysis of their relationship with the research outcomes. This section also included two screening questions, which served as eligibility criteria for participation. Specifically, respondents were asked (1) whether they were currently employed and (2) whether they were self-employed. These questions were essential to ensure the validity of the responses, as the study specifically targeted employees working within organizational settings. If a respondent answered “No” to the first question or “Yes” to the second, the survey automatically ended with a closing message.

The second section focused on measuring the level of *Employee Engagement* using a five-point Likert scale (1 = “Strongly Disagree”; 5 = “Strongly Agree”).

The third section was aimed at assessing the level of *Organizational Citizenship Behaviour* (OCB), also measured using a five-point Likert scale (1 = “Never”; 5 = “Always”), consistent with the approach used for *Employee Engagement*.

The final section was dedicated to the measurement of *Gender Diversity* within the respondent's organization. This part adopted a more objective approach with respect to the others by assessing the presence of inclusive programmes and initiatives, as well as the representation of women across different organizational levels in percentage terms.

This section was further divided into two subsections, both employing five-point Likert scales. The first subsection evaluated the presence of gender diversity initiatives and programmes (1 = “Not present at all”; 5 = “Very present”), while the second assessed the frequency of women’s representation across various organizational levels (1 = “Lower than 10%”; 5 = “Higher than 70%”).

The overall structure of the questionnaire was designed to enhance participant engagement and minimize the likelihood of incomplete or non-informative responses.

3.2.2.2 Evaluation of Employee Engagement

Employee Engagement represents the dependent variable of the study. To measure it, the Italian version of the Utrecht Work Engagement Scale (UWES) developed and validated by Schaufeli and Bakker (1999), was employed.

The scale comprises 17 items, divided into three dimensions: 6 items assessing vigour, 5 assessing dedication, and 6 assessing absorption. Respondents were asked to express their level of agreement with each statement using a 5-point Likert scale, where 1 corresponded to “Strongly Disagree” and 5 to “Strongly Agree”.

The UWES focuses on the positive aspects of work engagement, as engaged employees are more productive, motivated and committed to the organization, unlike other measurement scales that focus on negative constructs, such as burnout or job dissatisfaction.

In the literature confirmatory analyses have validated the three-dimensional structure of the scale, its reliability and cross-cultural applicability.

A detailed overview of the three dimensions encompassed in the scale is provided:

Factor 1: Vigour. This dimension reflects the level of energy and mental resilience that employees demonstrate while performing their work activities. Engaged individuals are typically willing to invest effort in their tasks and show high levels of enthusiasm. Vigour is also crucial in enhancing employees’ capacity to manage challenges effectively, contributing to a dynamic and responsive work environment.

Factor 2: Dedication. Dedication refers to the sense of significance, pride, and inspiration that individuals derive from their work. It includes commitment and the willingness to actively contribute to organizational objectives. This factor is essential for the alignment between employees’ personal goals and the mission of the organization.

Factor 3: Absorption. Absorption captures the extent to which employees are fully concentrated and engrossed in their work. It is associated with the psychological state of flow, during which individuals become deeply focused and often lose track of time. Higher levels of absorption are typically linked to higher levels of productivity, creativity and innovation.

The decision to employ the UWES rather than alternative scales was driven by its comprehensive three-dimensional structure, which enables a more detailed understanding of employees’ experiences. Moreover, its robust empirical validation and widespread use across diverse research contexts make it a reliable and effective tool for measuring work engagement.

3.2.2.3 Evaluation of Organizational Citizenship Behaviour

To evaluate the mediator variable of this research, *Organizational Citizenship Behaviour* (OCB), the scale developed by Lee and Allen (2002) was employed.

This scale consists of 16 items, divided into two subdimensions: 8 items measure OCBI, referring to citizenship behaviours directed toward individuals, while the remaining 8 items assess OCBO, which refers to behaviours aimed at benefiting the organization as a whole. Responses were recorded using a 5-point Likert scale, where 1 corresponded to “Never” and 5 to “Always.” In the existing literature, the reliability of the scale has been examined through Cronbach’s alpha, with coefficients ranging from .83 to .89 across different studies, indicating high internal consistency and the ability to produce stable results.

Its validity has been confirmed through multiple techniques, including confirmatory factor analysis, convergent validity and discriminant validity. These analyses have demonstrated that the scale fits well within the five-factor model of OCB, namely altruism, conscientiousness, sportsmanship, courtesy and civic virtue and that it correlates positively with other established measures of OCB, while showing negative correlations with indicators of deviant behaviour.

The decision to use this scale rather than an alternative was based on its foundation on an extensive review of the OCB literature and its widespread use in both organizational settings and academic research, making it a reliable and well-established measurement tool.

3.2.2.4 Evaluation of Gender Diversity

Gender diversity constitutes the independent variable of the present research. To assess it, a new scale was developed specifically for the purposes of this study, aimed at capturing both the strategic commitment of organizations toward gender diversity and the actual representation of women across different hierarchical levels.

The scale includes a total of 8 items, all measured through a 5-point Likert scale. It was intentionally structured into two distinct sections in order to provide a comprehensive assessment of both strategic and quantitative aspects of gender diversity within the respondent's organization.

The first section was designed to investigate the gender diversity strategies implemented by the organization (GDstrategy). It includes 5 items aimed at evaluating the extent to which the organization promotes gender inclusiveness through policies, initiatives and formal programmes. Respondents were asked to assess the presence of these measures within their workplace. Each item was rated on a 5-point Likert scale, where 1 corresponded to "Completely absent" and 5 to "Very present". This part of the scale is intended to reflect the organizational culture and commitment towards gender equality.

The second section focused on the actual frequency of female representation at various organizational levels (Gdfrequency). It consisted of 3 items, each addressing a specific hierarchical level. The first item asked respondents to indicate the approximate percentage of women in top-level positions, such as the board of directors or executive leadership. The second item referred to the presence of women in middle management roles, while the third explored the representation of women in lower-level or operational positions. These items were also evaluated using a 5-point Likert scale, with 1 indicating "Less than 10%" and 5 corresponding to "More than 70%".

This two-part structure allowed the scale to investigate both strategical information and numerical data: on one hand, it captured employees' awareness of organizational initiatives; on the other, it collected data on the actual presence of women at different decision-making levels. The rationale behind this design was to offer a complete and multidimensional view of how gender diversity manifests within organizations, in line with the

aim of the study to investigate its relationship with *Employee Engagement* and *Organizational Citizenship Behaviour*.

3.2.3 Analyses

The analyses of data collected through the questionnaire began with the calculation of the Cronbach’s alpha for each of the scales used, in order to assess their internal consistency and reliability. Although the reliability of the UWES and OCB scales has been confirmed in previous studies, this step was nonetheless performed for all scales included in the research.

All scales showed a Cronbach’s alpha higher than 0.70, indicating acceptable reliability, except for the scale measuring the presence of women across the three organizational levels (GDfrequency). The relatively lower reliability of this scale (Cronbach’s alpha = 0.659) may be attributed to the unequal distribution of responses across the three levels. However, the alpha value was not critically low and the overall scale used to assess *Gender Diversity*, combining GDstrategy and GDfrequency resulted reliable. The detailed values are reported in **Table 2**.

Table 2: Reliability - Cronbach alpha

	UWES	OCB	GDs	Gdf	GD
N° of items	17	16	5	3	8
Cronbach alpha	.916	.887	.882	.659	.829

Before proceeding with the statistical analyses, the scores obtained from each scale were standardized through the computation of Z-scores, in order to allow for comparability and reduce potential biases due to differences in scale ranges. Once standardized, the dataset was imported into the statistical software SPSS, which was used to carry out the analyses.

The first step in the empirical study focused on testing the first research hypothesis “*H1: Gender Diversity has a positive impact on Employee Engagement*”. To assess this relationship, a multiple linear regression model was estimated, with *Gender Diversity* as the independent variable and *Employee Engagement* as the dependent one.

Following this, a second model was developed to test the second hypothesis “*H2: Gender Diversity has a positive impact on Organizational Citizenship Behaviour (OCB)*”. Also in this case, a multiple regression approach was applied.

Subsequently, to verify the third hypothesis, “*H3: OCB has a positive effect on Employee Engagement*”, an additional regression model was implemented. The structure of this model mirrored the previous ones.

Finally, to test the last hypothesis, “*H4: The positive impact of Gender Diversity on Employee Engagement is mediated by Organizational Citizenship Behaviour (OCB)*”, a mediation analysis was conducted. This approach was selected to examine whether *OCB* acts as a mediator in the relationship between *Gender Diversity* and *Employee Engagement*.

The analysis was performed using Hayes’ Process macro, an SPSS extension designed to facilitate the testing of mediation and moderation models. Model 4 of the Process macro was employed, which tests a simple mediation framework involving one independent variable, one mediator and one dependent variable.

The mediation model was structured across three key steps. The first step estimates the effect of the independent variable (*Gender Diversity*) on the mediator (*OCB*), corresponding to the second hypothesis (H2) of this study. The second step evaluates the impact of the mediator (*OCB*) on the dependent variable (*Employee Engagement*), thus testing the first hypothesis (H1). Finally, the third step assesses both the direct effect of *Gender Diversity* on *Employee Engagement*, and the indirect effect transmitted through *OCB*.

The analysis was conducted using a 95% confidence interval. Statistical significance of the indirect (mediated) effect was determined based on whether the confidence interval included zero. If zero was not included, the indirect effect was considered statistically significant; on contrary, if zero was included in the interval, the mediation effect was considered non-significant.

Furthermore, additional objective indices of *Gender Diversity* were collected from Refinitiv, a global provider of financial markets data and infrastructure, to replicate the mediation analysis using more externally validated measures of the independent variable. Specifically, the *Diversity & Inclusion (D&I)* overall score was obtained, which is calculated as the arithmetic mean of four pillar scores: Diversity, Inclusion, People Development, and Controversies. This score reflects a company’s overall performance and commitment to diversity and inclusion practices. Additionally, the *Board Gender Diversity* overall score was calculated as the arithmetic mean of the percentage of women on the board and the percentage of women serving as executive members. These scores were also standardized via Z-transformation prior to analysis.

Unfortunately, due to incomplete availability of these indices for all organizations indicated by the respondents, the sample size for these additional analyses was consistently reduced, with 93 answers available for the analysis using the *D&I score* and 98 for the one using the *Board-executive diversity index*.

The same Hayes’ Process macro (Model 4) was applied to these datasets and the mediation analysis was repeated accordingly.

For all the above-mentioned analyses a set of socio-demographic control variables was used as covariates to control for potential influencing factors, including *Gender, Age, Marital Status, Children, Level of Education, Working Position, Organization’s Industry, Organization’s Size, Income*.

3.3 Results

The first linear regression performed tested the influence of the independent variable, *Gender Diversity*, on the dependent variable of the model, *Employee Engagement* (**Table 3**).

The R^2 of the model resulted equal to 0.17, meaning that the model including all the variables can account for about 20% of the variance of the dependent variable. The model resulted to be significant ($R^2 = 0.17$, $F [11, 315] = 5.93$, $p < 0.001$).

Table 3. Results of the linear regression performed to test the effect of Gender Diversity on Employee Engagement

	β	SE	t	p
Gender Diversity - strategy	0.380	0.056	6.777	0.000
Gender Diversity -frequency	0.019	0.055	0.343	0.732
Gender	0.069	0.111	1.253	0.211
Age	-0.044	0.006	-0.734	0.464
Marital Status	-0.029	0.084	-0.458	0.648
Children	-0.028	0.140	-0.433	0.665
Education	0.109	0.050	1.996	0.047
Working Position	0.074	0.054	1.227	0.221
Organization's Industry	0.005	0.099	0.100	0.920
Organization's Size	0.010	0.048	0.170	0.865
Income	0.033	0.066	0,455	0,649

N=327

The variable *Gender Diversity-strategy* demonstrated a statistically significant impact ($\beta = 0.38$, $t = 6.78$, $p < 0.001$), indicating that higher levels of initiatives and programmes for Gender Diversity implemented by the Organization lead to higher levels of Employee Engagement. Conversely, the Gender Diversity- frequency did not ($\beta = 0.019$, $t = 0.343$, $p = 0.732$). The control variable *Education* showed a statistically significant impact as well ($\beta = 0.109$, $t = 1.996$, $p < 0.05$), demonstrating that a higher level of education positively influences the engagement of employees. The other variables didn't show significant impacts on *Employee Engagement*. However, this first linear regression model confirmed that *Gender Diversity* positively influences *Employee Engagement*, which corresponded to the first hypothesis postulated.

The second multiple linear regression model was used to test the second hypothesis of the study: the same independent variable has been used, *Gender Diversity*, while the dependent variable was represented by *OCB* (Table 4).

The R^2 of the model resulted equal to 0.15, meaning that the model including all the variables explains about 15% of the variance of *OCB*. Moreover, the model resulted highly significant ($R^2 = 0.15$, $F [11, 315] = 4.93$, $p < 0.001$).

Table 4. Results of the linear regression performed to test the effect of Gender Diversity on Organizational Citizenship Behaviour

	β	SE	t	p
Gender Diversity - strategy	0.344	0.057	6.044	0.000
Gender Diversity -frequency	0.013	0.056	0.225	0.822
Gender	0.125	0.113	2.228	0.027
Age	0.036	0.006	0.596	0.552
Marital Status	0.043	0.085	0.668	0.505
Children	-0.055	0.142	-0.827	0.409
Education	-0.021	0.051	-0.383	0.702
Working Position	0.088	0.054	1.437	0.152
Organization's Industry	-0.004	0.101	-0.070	0.944
Organization's Size	-0.023	0.049	-0.370	0.711
Income	0.012	0.067	0.159	0.873

N=327

The model confirms the second hypothesis of the study, so *Gender Diversity* has a positive impact on *OCB*. In particular, the scale referred to the presence of programmes and initiatives for Gender Diversity within the Organization impacts *OCB*, meaning that more initiatives and programmes aimed at supporting *Gender Diversity* led employees to show more *OCB* ($\beta = 0.344$, $t = 6.044$, $p < 0.001$). On the other hand, the impact of the frequency with which women are present in the various organizational levels does not influence significantly *OCB* ($\beta = 0.013$, $t = 0.225$, $p = 0.822$).

Another variable that showed a significant impact on *OCB* is *Gender* ($\beta = 0.125$, $t = 2.228$, $p < 0.05$), for which a dummy variable was applied, where 0 indicated Woman and 1 indicated Man. This result implies that women tend to show more *OCB* compared to men. The other variables didn't show a significant impact on the dependent variable.

The third multiple linear regression model was aimed at testing the third hypothesis of the study, so whether *Employee Engagement* was influenced by *OCB* (Table 5). The dependent variable was represented by *Employee Engagement*, while the independent one was the *OCB*.

The R^2 of the model indicated that the variable included in it explained around 35% of the variance in the independent variable, with a value of 0.35. Moreover, the overall model showed a high significance ($R^2 = 0.35$, $F [10, 316] = 16.66$, $p < 0.001$).

Table 5. Results of the linear regression performed to test the effect of Organizational Citizenship Behaviour on Employee Engagement

	β	SE	t	p
Organizational Citizenship Behaviour	0.567	0.046	12.235	0.000
Gender	-0.044	0.096	-0.931	0.352
Age	-0.059	0.005	-1.116	0.265
Marital Status	-0.047	0.074	-0.835	0.405
Children	0.005	0.124	0.091	0.928
Education	0.101	0.044	2.095	0.037
Working Position	0.037	0.048	0.681	0.496
Organization's Industry	0.013	0.088	0.278	0.781
Organization's Size	0.054	0.042	1.005	0.315
Income	0.024	0.058	0.378	0.706

N=327

Based on the results, *OCB* influences significantly and positively to *Employee Engagement*, so higher levels of organizational citizenship behaviours lead to more engaged employees, confirming the third hypothesis of the study.

Moreover, *Education* showed a significant impact on employee engagement ($\beta = 0.101$, $t = 2.095$, $p < 0.05$). This result is in line with the first regression model, in which it had already been proven the impact of *Education* on *Employee Engagement*. The higher is the level of education of employees, the higher will be their engagement. The other variables didn't show significant impacts on the dependent variable.

Finally, another type of model was applied to investigate the fourth hypothesis of this research, whether the positive relation between *Gender Diversity* and *Employee Engagement* is mediated by *OCB*. The Hayes' Process Macro Model 4 tests a simple mediation framework involving one dependent variable, one independent variable and one mediator. In this case the dependent variable was represented by *Employee*

Engagement, the independent variable was represented by *Gender Diversity*, and concluding the mediator was represented by *OCB*.

The results of the model replicated those obtained in the first regression model analysing the impact of *Gender Diversity* on *Employee Engagement* (**Table 6**). The model resulted highly significant ($R^2 = 0.38$, $F [11, 315] = 17.41$, $p < 0.001$) and confirmed the results obtained in the previous analysis (**Table 3**), namely a positive effect of gender diversity on employee engagement ($\beta = 0.20$, $p < 0.001$). The covariate education also showed a positive and significant effect ($\beta = 0.11$, $p = 0.01$), while the other covariates were all non-significant.

Table 6. Results of the Hayes process macro model 4 performed to test the impact of Gender Diversity on Employee Engagement

	β	SE	T	p	LLCI	ULCI
Gender Diversity – overall	0.20	0.05	4.09	0.00	0.10	0.30
Gender	0.01	0.10	0.11	0.91	-0.18	0.20
Age	-0.01	0.01	-1.23	0.22	-0.02	0.00
Marital Status	-0.06	0.07	-0.87	0.38	-0.21	0.08
Children	0.00	0.12	-0.01	0.99	-0.24	0.24
Education	0.11	0.04	2.46	0.01	0.02	0.19
Working Position	0.03	0.05	0.55	0.58	-0.07	0.12
Organization’s Industry	0.01	0.09	0.09	0.93	-0.16	0.18
Organization’s Size	0.01	0.04	0.35	0.72	-0.07	0.10
Income	0.03	0.06	0.58	0.56	-0.08	0.14

N=327

The results of the model further replicated those of the second regression (**Table 7**), hence showing a positive and significant effect of gender diversity on OCB ($\beta = 0.33$, $p < 0.001$). Further, the covariate gender was found significant ($\beta = 0.25$, $p < 0.05$), while the other covariates were all non-significant.

Table 7. Results of the Hayes process macro model 4 performed to test the impact of Gender Diversity on Organizational Citizenship Behaviour

	β	SE	t	p	LLCI	ULCI
Gender Diversity – overall	0.33	0.05	6.01	0.00	0.22	0.44
Gender	0.25	0.11	2.19	0.03	0.02	0.47

Age	0.00	0.01	0.55	0.58	-0.01	0.02
Marital Status	0.06	0.09	0.74	0.46	-0.11	0.23
Children	-0.12	0.14	-0.82	0.41	-0.40	0.16
Education	-0.02	0.05	-0.49	0.63	-0.13	0.08
Working Position	0.08	0.05	1.41	0.16	-0.03	0.18
Organization's Industry	-0.02	0.10	-0.18	0.86	-0.22	0.18
Organization's Size	-0.02	0.05	-0.46	0.65	-0.12	0.07
Income	0.03	0.07	0.38	0.71	-0.11	0.16

N=327

Likewise, the results of the mediation model also replicated the findings of the third regression (**Table 8**). The model resulted highly significant ($R^2 = 0.38$, $F [11, 315] = 17.41$, $p < 0.001$), and showed a positive and significant effect of OCB on employee engagement ($\beta = 0.50$, $p < 0.001$). Among the covariates, only education was found to yield a positive and significant effect ($\beta = 0.11$, $p = 0.01$).

Table 8. Results of the Hayes process macro model 4 performed to test the impact of Organizational Citizenship Behaviour on Employee Engagement

	β	SE	t	p	LLCI	ULCI
Organizational Behaviour	0.50	0.05	10.57	0.00	0.41	0.60
Gender	0.01	0.10	0.11	0.91	-0.18	0.20
Age	-0.01	0.01	-1.23	0.22	-0.02	0.00
Marital Status	-0.06	0.07	-0.87	0.38	-0.21	0.08
Children	0.00	0.12	-0.01	0.99	-0.24	0.24
Education	0.11	0.04	2.46	0.01	0.02	0.19
Working Position	0.03	0.05	0.55	0.58	-0.07	0.12
Organization's Industry	0.01	0.09	0.09	0.93	-0.16	0.18
Organization's Size	0.01	0.04	0.35	0.72	-0.07	0.10
Income	0.03	0.06	0.58	0.56	-0.08	0.14

N=327

Finally, the last part of the model tested the direct and indirect effects of the independent variable *Gender Diversity* on the dependent variable *Employee Engagement*. Both the direct ($\beta = 0.20$, $t = 4.09$, $p < 0.001$), and indirect effects ($\beta = 0.17$, LLCI= 0.10, ULCI=0.23) resulted significant (**Table 8**). These results suggested that gender diversity exerts a positive direct impact on employee engagement as well as an indirect one that is crucially mediated by organizational citizenship behaviours.

Table 8. Results of the Hayes process macro model 4 performed to test the direct and indirect effects of Gender Diversity on Employee Engagement

	β	SE	t	p	LLCI	ULCI
Direct Effect	0.20	0.05	4.09	0.001	0.10	0.30
Indirect Effect	0.17	0.03	-	-	0.10	0.23

N=327

The Hayes' process macro analysis was repeated using *D&I score* as a more objective measure for the independent variable *Gender Diversity*. As already mentioned, data were not available for all the organizations indicated within the survey's responses and consequently the sample size was reduced consistently to 93 responses.

Through the application of the Hayes' process macro, it was possible to replicate the linear regressions performed to understand the effect of *Gender Diversity* and *OCB* on *Employee Engagement*.

The first part of the model represents the impact of the *D&I score* on *Employee Engagement*. The R^2 of the model resulted equal to 0.34, meaning that the model including all the variables can account for about 34% of the variance of the dependent variable. The model resulted to be significant ($R^2 = 0.34$, $F [11, 81] = 3.88$, $p < 0.001$). The results are illustrated in **Table 9**.

Table 9. Results of the Hayes process macro model 4 performed to test the effect of D&I score on Employee Engagement

	β	SE	t	p	LLCI	ULCI
D&I score	-0.14	0.10	-1.41	0.16	-0.34	0.06
Gender	0.05	0.19	0.26	0.80	-0.32	0.42
Age	-0.01	0.01	-0.67	0.50	-0.03	0.02
Marital Status	-0.19	0.16	-1.13	0.26	-0.51	0.14
Children	-0.30	0.25	-1.17	0.25	-0.80	0.21

Education	0.14	0.09	1.58	0.12	-0.04	0.32
Working Position	-0.02	0.09	-0.20	0.84	-0.21	0.17
Organization's Industry	0.09	0.14	0.67	0.50	-0.18	0.36
Organization's Size	0.12	0.16	0.77	0.45	-0.20	0.45
Income	0.05	0.12	0.40	0.69	-0.19	0.29
R^2	0.34					
$F_{11,81}$	3.88			0.001		

N=93

D&I score does not influence significantly *Employee Engagement*. However, it is noteworthy that the influence exerted would be negative ($\beta = -0.14$, $t = -1.41$, $p = 0.16$). The lack of significance may be attributed to the small sample size, while the negative influence can be explained in terms of stereotypes: many policies and initiatives taken by organizations to reinforce gender equality, may reinforce existing stereotypes or generate perceptions of preferential treatment. These reactions can undermine the intended positive effects being perceived as imposed or symbolic, weakening the impact on engagement and cohesion among employees.

The second part of the model testing the influence of *Gender Diversity* on *OCB* was overall not significant ($R^2 = 0.16$, $F [10, 82] = 1.60$, $p = 0.12$). The results are showed in **Table 10**.

Table 10. Results of the Hayes process macro model 4 performed to test the effect of D&I score on Organizational Citizenship Behaviour

	β	SE	t	p	LLCI	ULCI
D&I score	0.06	0.12	0.53	0.60	-0.17	0.29
Gender	0.13	0.21	0.62	0.53	-0.29	0.55
Age	0.04	0.01	2.68	0.01	0.01	0.06
Marital Status	-0.15	0.19	-0.78	0.44	-0.52	0.23
Children	-0.09	0.29	-0.31	0.75	-0.67	0.49
Education	-0.05	0.10	-0.49	0.62	-0.25	0.15
Working Position	0.12	0.11	1.14	0.26	-0.09	0.33
Organization's Industry	-0.25	0.15	-1.63	0.11	-0.55	0.05
Organization's Size	-0.08	0.19	-0.45	0.66	-0.45	0.29

Income	-0.10	0.14	-0.73	0.47	-0.38	0.17
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N=93

On the basis of these results, the *D&I score* has no significant effect on *OCB* ($\beta = 0.06$, $t = 0.53$, $p = 0.6$), while *Age* has a significant and positive effect ($\beta = 0.04$, $t = 2.68$, $p = 0.01$).

Subsequently, the effect of *OCB* on *Employee Engagement* was tested. The R^2 of the model resulted equal to 0.34, and the model resulted to be significant ($R^2 = 0.34$, $F [11, 81] = 3.88$, $p < 0.001$). The results are presented in **Table 10**.

Table 10. Results of the Hayes process macro model 4 performed to test the effect of Organizational Citizenship Behaviour on Employee Engagement

	β	SE	t	p	LLCI	ULCI
Organizational Citizenship Behaviour	0.57	0.10	5.85	0.00	0.37	0.76
Gender	0.05	0.19	0.26	0.80	-0.32	0.42
Age	-0.01	0.01	-0.67	0.50	-0.03	0.02
Marital Status	-0.19	0.16	-1.13	0.26	-0.51	0.14
Children	-0.30	0.25	-1.17	0.25	-0.80	0.21
Education	0.14	0.09	1.58	0.12	-0.04	0.32
Working Position	-0.02	0.09	-0.20	0.84	-0.21	0.17
Organization's Industry	0.09	0.14	0.67	0.50	-0.18	0.36
Organization's Size	0.12	0.16	0.77	0.45	-0.20	0.45
Income	0.05	0.12	0.40	0.69	-0.19	0.29
R^2	0.34					
$F_{11,81}$	3.88			0.001		

N=93

Organizational Citizenship Behaviour has a significant and positive impact on *Employee Engagement* ($\beta = 0.57$, $t = 5.85$, $p < 0.001$), in line with the result achieved employing the scores collected through the questionnaire as measurement of *Gender Diversity*.

Finally, the last part of the model, testing for direct and indirect effects, did not yield statistically significant results. This suggests that *D&I score* has no significant influence on *Employee Engagement* and, consequently, *OCB* does not represent the mediator of this relation. (**Table 11**)

Table 11. Results of the Hayes process macro model 4 performed to test the direct and indirect effects of the D&I score on Employee Engagement

	β	SE	t	p	LLCI	ULCI
Direct Effect	-0.14	0.10	-1.41	0.16	-0.34	0.06
Indirect Effect	0.03	0.06	-	-	-0.09	0.17

N=93

The same analysis has been repeated using the *Board executive diversity* index as the objective measure for *Gender Diversity*. Also in this case, data were not available for all the organizations included in the survey's responses and the sample size was reduced consistently to 98 answers.

Firstly, the impact of *Board executive diversity* on *Employee Engagement* was examined. The model proved significant, with an R^2 equal to 0.37, indicating that the model embedding all the variables explains around 40% of the variance of the dependent variable ($R^2 = 0.37$, $F [11, 86] = 4.62$, $p < 0.001$). The results are exposed in **Table 12**.

Table 12. Results of the Hayes process macro model 4 performed to test the effect of the Board Executive Diversity index on Employee Engagement

	β	SE	t	p	LLCI	ULCI
Board Executive Diversity	0.22	0.09	2.38	0.02	0.04	0.39
Gender	0.05	0.18	0.28	0.78	-0.30	0.40
Age	-0.01	0.01	-1.19	0.24	-0.04	0.01
Marital Status	-0.23	0.15	-1.50	0.14	-0.53	0.07
Children	-0.34	0.23	-1.48	0.14	-0.80	0.12
Education	0.14	0.08	1.66	0.10	-0.03	0.30
Working Position	-0.03	0.08	-0.34	0.74	-0.19	0.14
Organization's Industry	0.05	0.13	0.41	0.68	-0.21	0.31
Organization's Size	0.08	0.15	0.57	0.57	-0.21	0.38

Income	0.05	0.11	0.46	0.64	-0.16	0.26
R^2	0.37					
$F_{11,86}$	4.62			0.001		

N=93

The results show a significant and positive impact of *Board Executive Diversity* on *Employee Engagement* ($\beta = 0.22$, $t = 2.38$, $p=0.02$), in line with the results achieved using the questionnaire's responses.

The second part of the model analysed the impact of *Board executive diversity* on *OCB* and resulted significant (**Table 13**). The R^2 resulted equal to 0.18, indicating that the model including all the variables is able to explain around 20% of the variance of the dependent variable ($R^2 = 0.18$, $F [10, 87] = 1.92$, $p = 0.05$).

Table 13. Results of the Hayes process macro model 4 performed to test the effect of the Board Executive Diversity index on Organizational Citizenship Behaviour

	β	SE	t	p	LLCI	ULCI
Board Executive Diversity	-0.14	0.10	-1.42	0.16	-0.34	0.06
Gender	0.09	0.20	0.47	0.64	-0.30	0.49
Age	0.04	0.01	2.89	0.00	0.01	0.06
Marital Status	-0.15	0.17	-0.86	0.39	-0.49	0.19
Children	-0.12	0.26	-0.47	0.64	-0.64	0.40
Education	-0.05	0.09	-0.57	0.57	-0.24	0.13
Working Position	0.11	0.09	1.15	0.25	-0.08	0.30
Organization's Industry	-0.25	0.15	-1.74	0.08	-0.54	0.04
Organization's Size	-0.07	0.17	-0.41	0.68	-0.40	0.26
Income	-0.07	0.12	-0.62	0.54	-0.32	0.17
R^2	0.18					
$F_{10,87}$	1.92			0.05		

N=98

The results suggested that *Board Executive Diversity* has a non-significant impact on *OCB* ($\beta = -0.14$, $t = -1.42$, $p=0.16$).

The variable *Age* impacts significantly and positively *OCB* ($\beta = 0.04$, $t = 2.89$, $p < 0.001$), while the *Organization's Industry* also has a marginally significant and negative impact on *OCB* ($\beta = -0.25$, $t = 1.74$, $p = 0.08$) meaning that workers within the tertiary sector tend to have lowest levels of *OCB*.

Finally, the influence of *OCB* on *Employee Engagement* was tested and the model resulted highly significant with a R^2 equal to 0.37, suggesting that the full model explains about 40% of the variance of the dependent variable ($R^2 = 0.37$, $F [11, 86] = 4.62$, $p < 0.001$). The results are exposed in **Table 14**.

Table 14. Results of the Hayes process macro model 4 performed to test the effect of Organizational Citizenship Behaviour on Employee Engagement

	β	SE	t	p	LLCI	ULCI
Organizational Citizenship Behaviour	0.60	0.09	6.33	0.00	0.41	0.79
Gender	0.05	0.18	0.28	0.78	-0.30	0.40
Age	-0.01	0.01	-1.19	0.24	-0.04	0.01
Marital Status	-0.23	0.15	-1.50	0.14	-0.53	0.07
Children	-0.34	0.23	-1.48	0.14	-0.80	0.12
Education	0.14	0.08	1.66	0.10	-0.03	0.30
Working Position	-0.03	0.08	-0.34	0.74	-0.19	0.14
Organization's Industry	0.05	0.13	0.41	0.68	-0.21	0.31
Organization's Size	0.08	0.15	0.57	0.57	-0.21	0.38
Income	0.05	0.11	0.46	0.64	-0.16	0.26
R^2	0.37					
$F_{11,86}$	4.62			0.001		

N=93

The independent variable *OCB* has a highly significant and positive impact on *Employee Engagement* confirming the results achieved in the other models of the research ($\beta = 0.60$, $t = 6.33$, $p < 0.001$).

Moreover, *Education* has a marginally significant and positive impact on the dependent variable ($\beta = 0.14$, $t = 1.66$, $p = 0.10$), indicating that the higher is the level of education the higher is the level of *Employee Engagement*.

The last part of this model investigated the direct and indirect effects of the independent variable, *Board Executive Diversity*, on *Employee Engagement*, and the mediating role of *OCB* (Table 14).

Table 14. Results of the Hayes process macro model 4 performed to test the direct and indirect effects of the D&I score on Employee Engagement

	β	SE	t	p	LLCI	ULCI
Direct Effect	0.22	0.09	2.38	0.02	0.04	0.39
Indirect Effect	-0.09	0.06	-	-	-0.21	0.02

N=98

The direct effect confirms the positive impact on *Board Executive Diversity* on *Employee Engagement* ($\beta = 0.22$, $t = 2.38$, $p=0.02$), while the indirect effect testing the role of *OCB* as a mediator shows a marginal mediation effect of this variable ($\beta = -0.09$, LLCI= -0.32, ULCI=0.02).

In all the models control variables were included to account for the additional influence of demographic and professional characteristics within the model. These control variables are *Age*, *Gender*, *Education*, *Marital Status*, *Children*, *Working Position*, *Organization's Industry*, *Organization dimension*, *Income*, *Leader's gender*.

Chapter 4: Discussion

The current study explored the relationship between three variables: Gender Diversity, OCB and Employee Engagement, with the aim of testing whether the OCB represents a mediator in the relationship between Gender Diversity and Employee Engagement. It highlighted a series of results.

The first analysis was carried out by measuring Gender Diversity through a scale created specifically for this research, which permitted the distinction of two different aspects: the numerical representation of women within organizations and the presence of strategies and initiatives supporting gender equality. The results showed that only the second aspect has a significant and positive impact on OCB and Employee Engagement, confirming what emerged in literature: the mere presence of women is not sufficient, it is the perception of an environment of equality and inclusiveness that generates pro social behaviours and employee engagement (Tuan, Rowley & Thao, 2021; Downey et al., 2015). The analysed studies conducted by Tuan, Rowley and Thao (2021) and Downey et al. (2015) came to the same conclusions, demonstrating that diversity-oriented HR practices create a climate of inclusion leading to higher levels of engagement.

This supports also the conclusions reached in terms of Social Exchange Theory (Blau, 1964) and Equity Theory (Adams, 1963). The former postulates that employees tend to reciprocate equal treatments with major effort and discretionary behaviours, while the latter shows how the perception of justice and meritocracy leads to individual motivation. In this sense, the results confirm that when individuals perceive the organization engaged in inclusion initiatives and equality strategies, they demonstrate OCB and higher engagement.

Other relevant results achieved through the analysis confirm the positive and significant effect of OCB on Employee Engagement. This is coherent with the results reached by Herwann et al. (2020) and Rasheed & Siddiqui (2023) that demonstrated how discretionary behaviours lead to a sense of belonging and motivation, which, in turn, lead to higher levels of engagement. The positive relation emerged by the analysis conducted highlights that engagement is not only the consequence of contractual and remunerative factors, instead it derives also thanks to the quality of relationships and the level of collaboration within the working context. This suggests that organizations cannot count only on a promotion system that recognizes higher wages and better positions, instead it is fundamental to undertake measures able to create a context where positive emotions are dominant, in order to engage its employees. As already seen, initiatives that promote equality are a good example of an effective strategy.

Another fundamental conclusion regards the mediating role of OCB in the relation between Gender Diversity and Employee Engagement, providing a positive answer to the research question of the study. This filled the existing gap in the current body of literature, which is limited under this point of view, and reinforce the idea that the impact of Gender Diversity is not only direct, but it translates into major levels of engagement through the consolidation of a climate based on cooperation and organizational citizenship.

Moreover, some secondary results are interesting to discuss: the level of education proved to have a significant impact on Employee Engagement, consistently with what was suggested in studies such as the one conducted

by Rich et al (2010), based on which the psychological and cognitive resources of individuals impact their engagement level. Employees with higher levels of education may have higher expectations in terms of career and, when the organization satisfy these expectations, they tend to be more engaged.

The replication of the analysis using the index D&I score did not demonstrate significant results regarding the relation between the three variables of interest. However, it is noteworthy that the coefficient of the D&I index on Employee Engagement pointed in a negative direction. This result should be interpreted with caution, as the reduced sample size does not allow solid conclusions, and the effect could turn out differently with a larger dataset.

This difference from the previously achieved results using the scale developed for the study, although not statistically significant, deserves a discussion: while the former scale reflected the individual perception of employees, the second index is an external measure based on the organizational reporting and public information, and aggregating dimensions like diversity, people development and controversies. The index is certainly useful for comparative aims, but it reflects more the image that organizations want to give of themselves rather than the real internal perception of employees in relation to the initiatives promoted.

These uncoherent results are in line with the discussed literature, based on which practices that are promoted only for the sake of appearance and are not incorporated in the organizational culture generate a negative effect. In this case diversity policies may be interpreted as tools to improve the organizational image. Saleem, Rafiq & Yusaf (2017), as previously mentioned, discussed how equity policies, when not integrated with a cultural change within the organization, may reinforce the existing stereotypes and lead employees to consider women progression as a consequence of law obligations.

The second external index employed, the Board Executive Diversity Index, led to different conclusions: it showed a positive and significant effect on Employee Engagement, but not on OCB.

This conclusion is in line with the findings of Singhania et al. (2023) and Ben-Amar et al. (2017), who proved how an increase in the percentage of women directors is likely to lead to positive outcomes. In this case, this may translate into a higher governance quality and social responsibility, which could stimulate pride and sense of belonging. However, the absence of significant effects on OCB suggests that the mere presence of women in boards is not enough to influence employees' behaviours.

From a theoretical perspective, the research contributed to the existing literature providing new evidence of the consequences of Gender Diversity in organizations. It confirmed that Gender Diversity should not be considered only as a demographic variable, but rather as a driver of cultural and relational dynamics, that has the potential to improve organizational performance and employees' well-being. In this sense, the study provided evidence of the role played by the organizational context, policies and perceived inclusiveness in leveraging the positive effects of Gender Diversity and transform it into higher levels of engagement.

It also contributed to the debate on social exchange theory and equity theory in organizational research, suggesting that when employees perceive the organization as fair and inclusive, they reciprocate by engaging in extra-role behaviours that lead to a sense of belonging. This highlights that the drivers of engagement are

not limited to individual or job-related factors, but also to the perception of equality and justice as organizational values.

The research also underlined the importance of contextual factors in the relation between Gender Diversity, OCB and Employee Engagement. The results obtained should be interpreted on the basis of the specific characteristics of the industry, country and culture analysed. The differences in terms of national culture have a central role in influencing the impact of Gender Diversity initiatives. In contexts characterized by high levels of discrimination or gender stereotypes this impact may result distorted. An example is the study conducted by Mousa, Massoud & Ayoubi (2020) in the Egyptian context, that showed how women perceive gender policies and initiatives more positively because they are used to a hostile context, and they develop high levels of OCB.

The industry specifics need to be considered too, as industries like the manufacturing and healthcare demonstrated a high sensitivity to the climate of inclusion and trust, that become fundamental elements in determining the level of engagement (Downey et al., 2015; Tuan, Rowley & Thao, 2021). On the contrary, in more traditional industries characterized by strong hierarchies and leadership, the impact of Gender Diversity policies may be slower or less visible.

The influence of external factors confirms what was already seen in literature (Gao, 2020; Kidder & McLean Parks, 2001) and suggests that the efficacy of Gender Policies is not universal but strongly dependent from the context within which these are applied.

4.1. Managerial Implications

In today's organizational landscape, these implications become even more relevant if we consider the changing expectations of the workforce. New generations of employees, particularly Millennials and Gen Z, are increasingly attentive to issues of social sustainability, fairness and diversity. As highlighted in the literature, engagement is no longer driven only by financial incentives or career advancement, but also by the perception that the organization embraces inclusiveness and ethical responsibility (Kulik & Metz, 2017; Fine, Sojo & Lawford-Smith, 2020). This makes gender diversity practices not only a matter of compliance but also a crucial signal of authenticity and commitment that employees evaluate when shaping their attitudes and behaviours.

The evidence obtained provide concrete managerial implications. First, organizations should move beyond a mere compliance-oriented approach to Gender Diversity policies, often reduced to fulfilling reporting obligations or meeting gender quota thresholds. While such measures may improve representation, they can also generate unintended consequences by reinforcing gender stereotypes. As highlighted in the literature, when diversity is pursued only to satisfy external requirements, there is a risk that women's progression and promotion will be perceived not as the outcome of competence and professional skills, but rather as a symbolic gesture driven by the organization's need to comply with legal or reputational pressures (Saleem, Rafiq &

Yusaf, 2017; Arfken, Bellar & Helms, 2004; Fine, Sojo & Lawford-Smith, 2020). This perception undermines the credibility of diversity initiatives and may exacerbate existing biases rather than overcome them.

To avoid these pitfalls, organizations should invest in substantive practices that foster inclusiveness and fairness. Implementing transparent career monitoring systems, designing clear and equitable promotion criteria and supporting work-life balance initiatives are critical levers to create a climate of fairness, equality, and meritocracy. Such initiatives not only reduce structural inequalities but also enhance Employee Engagement by making employees feel valued, supported and included. In this way, organizations can amplify the positive effects of Gender Diversity, building a more motivated, engaged and resilient workforce. In this context, another priority for managers is addressing the glass ceiling, which continues to prevent women from reaching higher managerial and executive positions despite equivalent qualifications. Dismantling these barriers requires more than entry-level or mid-level gender balance.

Finally, managers must carefully consider how diversity initiatives are communicated within the organization. When perceived as merely symbolic or externally imposed, these efforts risk being dismissed and may even foster cynicism among employees. Instead, diversity and inclusion strategies should be embedded in the organization's culture, presented as integral to its values, and consistently reinforced through leadership behaviour and organizational practices. Only in this way can diversity initiatives be perceived as authentic, legitimate and conducive to a truly inclusive and engaging work environment.

Overall, the findings emphasize that gender diversity, when authentically embedded in organizational culture and supported by inclusive practices, not only enhances employee engagement but also fosters organizational resilience.

4.2. Limitations

Some limitations of the study must be mentioned. Firstly, the dataset used to conduct the analyses is numerically adequate, but it is not representative of all the countries and industries and consequently it doesn't allow for the generalization of results to different working contexts.

Secondly, the use of self-report measures to assess the level of engagement, OCB and the perception of Gender Diversity represents a limitation: self-reported data can be influenced by a number of factors, including social-desirability bias, which may occur if participants overestimate their extra role behaviours to project a positive image of themselves, and subjective perception bias, referring to the subjective interpretation of the questions proposed on the basis of the experience and sensitivity of each respondent.

Furthermore, the data collected are cross-sectional, so they capture the picture of the situation only in relation to the moment in which the questionnaire was submitted, not allowing for the analysis of the variation in dynamics during time.

The scale used to measure the numerical percentage distribution of women in the organization showed lower statistical reliability, probably because respondents could provide very different answers to the three questions of the scale creating internal heterogeneity.

Finally, the analyses with external indexes, namely D&I score, and Board Gender Diversity score collected from Refinitiv, was replicated only using a small subsample, since the data weren't available for all the organizations indicated by the respondents, and it limited the robustness of the conclusions achieved.

Future research may also include other relevant factors able to influence Employee Engagement and OCB in the analyses to provide a more detailed picture of the situation, such as the leadership style, the organizational climate and the country's culture.

Conclusion

The present research investigated the relation between Gender Diversity, OCB and Employee Engagement, aiming to understand whether OCB acts as a mediating factor between diversity and engagement.

Starting from a comprehensive literature review, the research highlighted the increasing importance of Gender Diversity both in academic and managerial debate, not only as a social and ethical issue, but also as a lever to improve organizational performance and generate value.

The empirical analysis, conducted on a sample of 327 respondents, confirmed the positive influence of Gender Diversity on Employee Engagement, particularly when sustained by inclusive strategies and initiatives, rather than the sole numerical presence of women across the different hierarchical levels.

Moreover, the results underlined that OCB has not only a significant direct impact but also plays a mediation role in the relation between diversity and engagement. This strengthens the idea that diversity should not only be considered as a demographic feature, but as a driver of collaborative behaviours and organizational well-being.

The study contributed to the debate highlighting that OCB acts as a mechanism through which inclusive practices transform to higher levels of engagement. Furthermore, it emphasized the dynamic and contextual nature of diversity, which should be considered as a variable strongly influenced by multiple external factors. On a managerial level, the results provided concrete insights for organizations: actively invest on diversity policies, strategies and initiatives, embedding the value of equality in the organizational culture and dismantling barriers such as the glass ceiling, instead of being only compliant with the legislation enforcing the existing stereotypes, is the path for the creation of collaborative behaviours and to reach high levels of Employee Engagement and sense of belonging.

Naturally, the research presents some limitations, such as the dependence on self-reporting measures, the cross-sectional design and the limited generalizability of the sample. These limitations suggest new avenues for future research, that may go into detail through longitudinal analyses, the usage of objective indexes for

diversity and the inclusion of other variables, for example the leadership style, the cultural differences and the organizational climate.

In conclusion, the research demonstrated that Gender Diversity, when accompanied by effective management practices, can represent a strategic lever for Employee Engagement. By fostering inclusive environments and encouraging citizenship behaviours, organizations not only respond to ethical and social expectations, but also unlock the full potential of their workforce.

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