

Empowering the Employees: How Authentic Leadership Drives Performance

Looking into Organizational Trust and Psychological Empowerment as Mediating Variables

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Abstract

Several previous studies have highlighted a positive relationship between perceived authentic leadership and employee performance, which is crucial for company performance. However, there is a limited amount of research exploring mediating variables in this relationship. By drawing on social exchange and self-determination theory, this study aims to expand the nomological network of authentic leadership, by investigating whether organizational trust and psychological empowerment can explain this relationship. Despite theoretical reasons to expect these variables to mediate this relationship, their role has not yet been investigated empirically.

Utilizing a parallel mediation model, the results of an online survey conducted among Dutch employees ($n = 110$) reveal that organizational trust cannot explain the relationship between perceived authentic leadership and employee performance. The analysis using Process Model 4 indicates that there is a positive association between perceived authentic leadership and organizational trust, but an increase in organizational trust is not positively associated to a higher employee performance. This means that organizational trust is only an outcome of a higher perceived authentic leadership. However, the results confirm that psychological empowerment can explain the relationship: a higher level of perceived authentic leadership is associated with a higher level of psychological empowerment, which in turn is associated with a higher employee performance. In order to improve employee performance, organizations should take the authenticity of leaders into account when selecting them. They also should incorporate psychological empowerment in the development of leadership programs, as only well-designed leadership programs lead to substantial benefits.

However, these results should be interpreted with some caution, as a convenience sample is utilized. Future research could for example benefit from combining psychological empowerment with earlier findings on mediating variables in the relationship between authentic leadership and employee performance into one comprehensive model.

Keywords: authentic leadership, organizational trust, psychological empowerment, employee performance, leadership influence

Preface

'Don't be a know-it-all. Be a learn-it-all' - Satya Nadella (CEO of Microsoft)

Satya Nadella (Microsoft) and Tim Cook (Apple) are the CEOs of two of the largest companies in the world. Their leadership styles are often linked to authenticity, with a focus on the well-being of their employees. According to Forbes (2023), both companies are ranked in the top 5 best employers globally. As a Strategic Management student, this immediately captured my interest and inspired me to further explore this leadership style.

This thesis examines how authentic leadership leads to a higher employee performance, by investigating the potential explanatory effects of organizational trust and psychological empowerment. It serves as the final step in obtaining my Strategic Management Master's degree at Radboud University in Nijmegen. After months of hard work to reach this goal, I am proud to present this thesis. I can definitely say that this thesis has made a valuable contribution to my knowledge of Strategic Management and, more specifically, leadership styles.

Finishing this thesis would not have been possible without the support of several individuals. Firstly, I would like to express my gratitude to my supervisor, Ilze van Heerden. Her feedback, suggestions and insights have played an important role in the process. I would also like to thank my parents, brother, closest friends and girlfriend for their mental support and encouragement in the process.

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1. Introduction

1.1 Introduction of the Topic and Relevance

Authentic leadership, originally proposed by Luthans and Avolio (2003), emerged as a response to low levels of employee confidence in leadership during the early 2000s. Multiple corporate scandals and poor management led to a need for more ethical leadership approaches (Gardner et al., 2011). Authentic leadership is characterized by authentic leaders displaying their true selves to their subordinates, fostering for example trust, cooperation and teamwork within an organization (Avolio & Gardner, 2005). Understanding the framework of authentic leadership is crucial, as prior studies indicate that it leads to positive organizational and personal outcomes like job satisfaction (Wong & Laschinger, 2013), employee well-being (Van Den Bosch & Taris, 2014), and employee performance (Duarte et al., 2021).

Outlining the relationship between authentic leadership and employee performance is vital for organizations, as employee performance directly impacts company performance and as employees can be seen as the most important asset of organizations (Vosloban, 2012; Gabcanova, 2011). Moreover, prior research indicates that leadership has a significant effect on employee performance (Paais & Pattiruhu, 2020). There has been extensive research supporting the positive effect of authentic leadership on employee performance (e.g. Wang et al., 2014; Banks et al., 2016; Duarte et al., 2021). However, prior research into the underlying mechanisms is still limited.

To create a more comprehensive understanding of this relationship, Avolio and Mhatre (2012) suggest investigating a broader range of mediators related to authentic leadership and performance outcomes. Previous research has for example examined the mediating effects of leader-member exchange (Wang et al., 2014), basic need satisfaction (Leroy et al., 2015), and affective commitment and individual creativity (Duarte et al., 2021). However, this limited exploration is problematic, as relationships between constructs often involve more mediating variables (Hair et al., 2021). This is especially expected in complex systems such as organizations, where several factors can influence employee behavior and performance. Therefore, Mackinnon et al. (2007) suggest employing multiple mediation models for a more accurate assessment of mediating effects, making it important to examine other potential mediating variables in the relationship between authentic leadership and employee performance.

Organizational trust and psychological empowerment have not been investigated as explanatory variables in this relationship, while earlier research suggests mediating roles. For example, Zhang et al. (2021) indicate a positive effect of authentic leadership on workplace trust, while Zak (2017) concludes that companies with high levels of trust have a 50% higher productivity level. In addition, Arda et al. (2016) call for research into the mediating effect of organizational trust, based on their literature review. Examining psychological empowerment is also important, as Llorente-Alonso et al. (2023) indicate that psychological empowerment is an important antecedent of employee performance. Dust et al. (2018) argue that there is a relationship between ethical leadership and psychological empowerment, giving theoretical grounds to suspect that there is a mediating effect of psychological empowerment. Mapping out the mediating effects of organizational trust and psychological empowerment is important, as both variables have positive effects on for example organizational performance (Su et al., 2020; Zhang et al., 2023).

Therefore, this research positions itself within the existing literature that aims to better understand the relationship between authentic leadership and employee performance, by empirically investigating organizational trust and psychological empowerment as potential mediators. As according to Laguna et al. (2019) employees' perceptions of leaders are a more reliable source and Meindl (1995) argues that followers' perceptions have a greater influence on follower behavior, this thesis will look from the view of employees, focusing on perceived authentic leadership.

To explore the potential mediating effects of organizational trust and psychological empowerment, the perspectives of social exchange and self-determination theory will be utilized. Social exchange theory indicates that people have a natural tendency to reciprocate favors. This means that if a leader performs a favor for another, the recipient feels an obligation to reciprocate in a positive manner to maintain balance in the relationship (Cropanzano et al., 2017). This lens can potentially offer explanations for the mediating effect of organizational trust, as Cropanzano et al. (2017) argue that favorable treatments are often repaid (reciprocated) by employees with better job performance. Prior research by Zak (2017) indicates that organizational trust leads to a higher employee loyalty, and social exchange theory views trust as an essential pillar (Cropanzano et al., 2005). Therefore, it is expected that organizational trust will be seen as a favorable treatment and will be reciprocated by a higher job performance. Self-determination theory is introduced to explore the mediating

effect of psychological empowerment. This theory posits that individuals have three fundamental psychological needs, essential for motivation (Deci & Ryan, 2017). This theory is suitable, as authentic leadership focuses on satisfying psychological needs, leading to higher motivation (Leroy et al., 2015; Deci & Ryan, 2017). Considering the close relationship between psychological empowerment and the components of self-determination theory, as evidenced by overlapping components, this theory is considered a more appropriate lens for understanding this relationship (Spreitzer, 1995; Deci & Ryan, 2017).

By integrating social exchange and self-determination theory, an attempt is made to gain a better understanding of the relationship between perceived authentic leadership and employee performance by investigating the mediating effects of organizational trust and psychological empowerment. This leads to the research question: *'What role do organizational trust and psychological empowerment play in the relationship between perceived authentic leadership and employee performance?'*

This research contributes to the literature by responding to the call by Gardner et al. (2011) for an expansion of the nomological network regarding the effects of authentic leadership on employee outcomes, by trying to get a better and more comprehensive understanding of the relationship between perceived authentic leadership and employee performance. This is important for providing evidence of construct validity (Gardner et al., 2011). The nomological network shows the key constructs in the theoretical framework, their operationalization within the empirical framework and the linkages between the constructs (Gardner et al., 2011). Next to this call for expansion of the nomological network, they argue that there is a gap between the theoretical and empirical framework of authentic leadership, indicating that several important aspects have not been empirically investigated yet. For the first time, using social exchange and self-determination theory, this thesis empirically investigates organizational trust and psychological empowerment in the relationship between perceived authentic leadership and employee performance.

This thesis also has managerial relevance for organizations in general. By investigating the underlying mechanisms in the relationship between authentic leadership and employee performance, this thesis can provide insights that organizations can use for selecting leaders and developing leadership programs. Leadership development programs can offer substantial benefits for companies, but only when done right (Yemiscigil, 2023). This makes it crucial to know the underlying mechanisms, to develop better and more accurate leadership

development programs. Moreover, the findings of this thesis can indicate whether organizational trust and psychological empowerment can be important areas for organizations aiming to optimize their employee performance, by showing whether enhancing organizational and psychological empowerment leads to a higher employee performance and whether authentic leadership can help organizations to maximize organizational trust and psychological empowerment.

1.2 Outline of the Thesis

This thesis consists of five chapters in total. Chapter 2 starts with defining the concepts. In addition, it assesses the expected relationships between the variables and will focus on formulating the hypotheses. Chapter 3 discusses the research methodology. Chapter 4 examines the results of the online survey. Chapter 5 draws conclusions and will discuss disparities with expectations. It also discusses theoretical and practical implications and ends with limitations and recommendations for future research.

2. Theoretical Background and Hypotheses Development

This chapter elaborates on the existing literature and defines the concepts that are central in this thesis. After this, the hypotheses will be developed. The chapter will conclude by establishing the conceptual model.

2.1 Theoretical Background

2.1.1 Perceived Authentic Leadership and Employee Performance

Authentic leadership has received significantly more scholarly attention in the last decade (Duarte, 2021). This leadership style was proposed for the first time by scholars in 2003 (Luthans & Avolio, 2003). Authentic leadership has gained a lot of variety in definitions over the years. However, Gardner et al.'s (2005) work is most commonly considered as the foundation (Gardner et al., 2011). In this, the authors indicate that authentic leadership consists of two main components: self-awareness and self-regulation.

Walumbwa et al. (2008) conclude that these two components are the core of authentic leadership, consisting of four dimensions: self-awareness, relational transparency, balanced information processing and internalized moral perspective. Avolio et al. (2018) and Banks et al. (2016) indicate that these factors are still justified today. Walumbwa et al. (2008) define authentic leadership based on these aspects using the following definition: 'a pattern of leader behavior that draws upon and promotes both positive psychological capacities and positive ethical climate, to foster great self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development' (p. 94). This thesis adopts this definition, as it is the most utilized one (Kleynhans et al., 2022). Positive psychological capacities refer to the inner qualities of an individual leader to be able to effectively lead others. A positive ethical climate can be seen as a climate that promotes ethical behavior (Walumbwa et al., 2008).

The first dimension of authentic leadership is self-awareness. This involves the leader's understanding of his/her own strengths and weaknesses. This implies that leaders know their abilities and limitations and know how their actions affect others. Relational transparency means that leaders show the true version of themselves to others. This transparency promotes trust, as information is shared openly. As a result, followers will perceive the leaders as genuine and authentic. Balanced processing means that leaders show that they are analyzing all data objectively. They demonstrate openness to other viewpoints before making decisions. Internalized moral perspective refers to a high level of internal moral standards (an integrated

form of self-regulation). This means that leaders do what is morally right, rather than focusing on personal gains or organizational successes. In doing so, they serve as role models for ethical conduct (Walumbwa et al., 2008).

This thesis will examine authentic leadership within the context of followers' perceptions (perceived authentic leadership). Firstly, this is because followers' perceptions are more crucial for successful leadership than the perceptions of the leader (Kouzes & Posner, 1989). Moreover, evaluations of employees' perceptions of authentic leadership are considered more reliable than leaders' self-perceptions, especially in situations where multiple observers provide judgments (Laguna et al., 2019). The perceptions of followers also have a greater influence on followers' behavior, underscoring the relevance of focusing on perceived authentic leadership (Meindl, 1995).

Following the conceptualization of authentic leadership, research began to focus on exploring antecedents and consequences. Prior research has shown that authentic leadership has positive effects on various attitudinal and behavioral outcomes, such as work engagement (e.g. Towsen et al., 2020; Baquero, 2023) job satisfaction (e.g. Banks et al., 2016) and employee performance (e.g. Wang et al., 2014; Banks et al., 2016; Duarte et al., 2021).

Rachmaliya and Effendy (2017) define employee performance as "the level of success of employees in carrying out their duties and responsibilities" (p. 42). This definition is adopted in this thesis. They emphasize that this employee performance can be the result of individuals' work in terms of both quality and quantity (Rachmaliya & Effendy, 2017).

There is evidence that the concepts of authentic leadership and employee performance are related. Several previous studies conclude that authentic leadership has a direct effect on employee performance. For instance, Wang et al. (2014) examined the effect of perceived authentic leadership on job performance by looking at employees' perceptions. They demonstrate a strong and significant effect. Additionally, Banks et al. (2016), based on their meta-analysis of the effects of authentic leadership on work outcomes, conclude that there is a strong correlation between authentic leadership and organizational performance, as well as task performance. Furthermore, Duarte et al. (2021) conclude that there is a direct effect of employees' perceptions of the leaders' authentic leadership on employees' performance, which can be explained by the norm of reciprocity. This is because authentic leadership is perceived by employees as positive behavior, as characteristics such as transparency, positivity and high

ethical standards are typical for a high degree of authentic leadership (Duarte et al., 2021; Walumbwa et al., 2008). Individuals have a natural tendency to reciprocate positive treatments or favors (Cropanzano et al., 2017). Consequently, employees feel a need to improve their performance, to repay the positive behavior of leaders and to establish a balance in the exchange relationship. As a result, they repay authentic leadership through higher levels of performance (Duarte et al., 2021). Building upon this evidence regarding the effect of authentic leadership on employee performance, this effect of perceived authentic leadership on employee performance is used as the baseline:

H1: Perceived authentic leadership is positively related to employee performance.

This relationship will be further explored by examining the unexplored potential mediators organizational trust and psychological empowerment, to develop a better and more complete picture of how this effect is established.

2.1.2 Organizational Trust and Psychological Empowerment as Mediating Variables

Further research into the relationship between authentic leadership and employee performance is important, as there is limited research on how this relationship unfolds, while employee performance is a significant determinant of company performance (Vosloban, 2012). Previous research has for example examined the potential mediating effects of leader-member exchange (Wang et al., 2014), basic need satisfaction (Leroy et al., 2015), and affective commitment and individual creativity (Duarte et al., 2021). However, some other potentially important variables remain unexplored. This is in contrast to the extensive exploration of the effects of authentic leadership on for example work engagement, where for instance trust (Wang & Hsieh, 2013; Hassan & Ahmed, 2011) and psychological empowerment (Towsen et al., 2020) emerge as key mediators. This relationship between authentic leadership and work engagement can provide important insights, as there is a positive association between work engagement and job performance, suggesting a close relationship between these concepts (Yao et al., 2022). This gives reasons to think that these aspects can also explain the relationship between authentic leadership and employee performance.

Also other studies give reasons to believe that organizational trust and psychological empowerment mediate the relationship. Looking at organizational trust, Zhang et al. (2021) indicate a positive relationship between authentic leadership and workplace trust.

Additionally, Zak (2017) argues that companies with higher levels of trust have a higher

productivity and de Jong et al. (2016) indicate that intrateam trust strongly impacts team performance. Regarding psychological empowerment, previous research links authentic leadership to psychological empowerment (Towsen et al., 2020; Zhang et al., 2018). Psychological empowerment, in turn, plays an important role in enhancing job-related outcomes. A higher level of psychological empowerment leads to for example a higher work engagement (Towsen et al., 2020). Moreover, Mathew and Nair (2021) indicate that a higher psychological empowerment leads to a higher job satisfaction, while Juyumaya (2022) argues that psychological empowerment enhances task performance. Based on this, it can be expected that organizational trust and psychological empowerment play an important role in explaining the effect of authentic leadership on employee performance.

Organizational trust is most often cited by the definition of Shockley-Zalabak et al. (2000). They define organizational trust as ‘positive expectations individuals have about the intent and behaviors of multiple organizational members based on organizational roles, relationships, experiences, and interdependencies’ (p. 35). This definition is adopted in this thesis. Joo et al. (2022) provide a broader framework and argue that the definition of Shockley-Zalabak et al. (2000) also can be seen as ‘the overall belief in the climate of trust within an organization’ (p. 9), suggesting that it represents the internal trust within an organization (Huff & Kelley, 2003).

Psychological empowerment consists of four cognitions: meaning, competence, self-determination and impact (Thomas and Velthouse, 1990). Meaning is seen as an individual’s assessment of the value of work goals, considering their ideals (Llorente-Alonso et al., 2023). Competence is an individual’s belief in their abilities to achieve a required outcome (Gist, 1987). Self-determination refers to one's perception of having the freedom to choose actions (autonomy), along with a sense of responsibility for the consequences (Llorente-Alonso et al., 2023). Impact is seen as the extent to which employees' actions influence organizational productivity levels (Ashforth, 1989).

The meta-analysis by Llorente-Alonso et al. (2023) combined these aspects of psychological empowerment into a single definition. They indicate that the absence of one of the dimensions does not eliminate psychological empowerment but only decreases it, allowing for a comprehensive definition. Psychological empowerment is based on Llorente-Alonso et al. (2023) seen as ‘A cognitive, subjective and motivational process by which individuals perceive themselves as effective and competent for carrying out tasks, with sufficient capacity

to ensure their completion. Moreover, the tasks themselves are deemed relevant and meaningful, and individuals feel they have freedom of choice in relation to them' (p. 1760).

2.2 Hypotheses

2.2.1 Social Exchange Theory

Social exchange theory is introduced to examine the mediating effect of organizational trust in the relationship between authentic leadership and employee performance. It is viewed as the cornerstone of understanding workplace behavior and a leading perspective in management (Cropanzano et al., 2017). The theory, originally proposed by Blau (1964), posits that individuals develop exchange relationships based on mutual experiences, with reciprocity as a central concept. Li et al. (2017) indicate that people have a natural tendency to reciprocate favors. This means that if one party performs a favor for another, the recipient feels an obligation to reciprocate in a similar manner (Cropanzano et al., 2017). Individuals will respond to positive actions in a positive way, while they will respond to negative actions in a negative way (Cropanzano & Mitchell, 2005). When this reciprocity occurs, it will lead to a trusting and loyal relationship between the individuals (Cropanzano & Mitchell, 2005).

Cropanzano et al. (2017) explain that social exchange theory consists of three components. The first part is an actor's initiation toward a target. This initiation can be positive (a favorable treatment) or negative (an unfavorable treatment). Subsequently, there will be a reciprocal attitudinal and/or behavioral response from the target. Based on this, there will evolve a relationship between the two involved parties (Cropanzano and Mitchell, 2005). Translating these components to specifically the context of leadership, social exchange theory can explain how leaders' behavior can influence the attitudes and actions of the employees (Madison et al., 2023). If leaders exhibit positive behavior towards employees, followers reciprocate this behavior in a positive way, due to feelings of obligation (Madison et al., 2023). They repay these favorable treatments often with higher job performance, cultivating the exchange relationship (Cropanzano et al., 2014; Zhang et al., 2021; Cropanzo & Mitchell, 2005). In this thesis, the focus lies on exploring how authentic leadership influences employee performance. This entails examining how leaders' behavior influences employee actions. Therefore, social exchange theory offers a valuable lens. Authentic leadership focuses on creating trustful relationships between leaders and employees, making social exchange theory relevant due to its focus on reciprocal exchanges (Kleynhans et al., 2022). Moreover, this lens also offers an interesting perspective on organizational trust as a mediating variable, as

Cropanzano and Mitchell (2005) indicate that trust can be seen as a fundamental pillar of social exchange relationships and Singh & Srivastava (2016) argue that trust, created by decision-makers, is reciprocal.

2.2.2 The Mediating Role of Organizational Trust

From a social exchange theory perspective, it is proposed that organizational trust mediates the relationship between authentic leadership and employee performance. Firstly, it is expected that the core dimensions of authentic leadership (self-awareness, relational transparency, balanced information processing and internalized moral perspective) lead to higher levels of organizational trust.

Self-awareness means that individuals know their strengths and weaknesses (Walumbwa et al., 2008). Almazrouei (2023) argues that authentic leaders will share their strengths and weaknesses with employees due to their transparent nature, fostering a supportive organizational environment and creating trust among the employees. This is because by sharing their weaknesses, these authentic leaders show that they are vulnerable. Vulnerability, such as acknowledgment of weaknesses by a leader, leads to an atmosphere of trust (Bell, 2005). Consequently, self-awareness in combination with relational transparency is expected to enhance organizational trust.

A higher level of balanced information processing is also expected to lead to a higher organizational trust. Balanced information processing means that leaders are taking into account other viewpoints and are analyzing all data objectively (Walumbwa et al., 2008). Clapp-Smith et al. (2009) argue that balanced processing leads to more thoughtful decisions. This leads to a higher trust because future actions taken within the organization are more predictable, as previous experiences can be used to predict the future actions of the leaders (Clapp-Smith et al., 2009). When leaders consider employees' opinions in their decisions, employees are more likely to expect that future decisions will also take them into account, leading to less uncertainty.

Authentic leadership is also driven by moral standards and values, known as internalized moral perspective. Leaders who demonstrate empathy and treat followers with respect (serving as role models for ethical conduct), create a climate of trust. This is because a positive ethical climate creates a pleasant working environment, fostering trust among employees (Lis et al., 2015). An ethical work climate also supports trust as it leads to a shared understanding of rules, resulting in a higher perceived fairness (Ascigil & Parlakgümüs,

2012). It can be expected that this higher perceived fairness leads to fewer conflicts, making it a trusting environment. As a result, a higher level of internalized moral perspective is expected to enhance organizational trust.

Social exchange theory suggests that this higher level of organizational trust leads to a higher employee performance, as favorable treatments are reciprocated by employees in a positive way, often by improving their job performance (Cropanzano et al., 2017). According to Yadav (2016), organizational trust is a fundamental aspect of creating positive work attitudes among employees. This demonstrates that organizational trust is seen as a favorable treatment, and therefore, it is likely to be reciprocated by a higher employee performance. Given that research by for example Verburg et al. (2017) shows that a higher organizational trust leads to a higher employee performance, there is a strong likelihood that there is a situation of reciprocation of the favorable treatment here. Thus, it is likely that organizational trust mediates the relationship between authentic leadership and employee performance. This leads to hypothesis 2:

H2: Organizational trust mediates the positive relationship between authentic leadership and employee performance.

2.2.3 Self-Determination Theory

Self-determination theory is introduced to look at the mediating effect of psychological empowerment. It is seen as an evidence-based framework for looking at how employees can be motivated (Forner et al., 2020). This theory indicates that people have three basic psychological needs that are essential for motivation, well-being and optimal functioning. These needs are autonomy, competence and relatedness (Deci & Ryan, 2017). They argue that autonomy is the need for employees to have ownership of their behavior. This consists for example of freedom in making decisions and feeling psychologically free (Deci & Ryan, 2000). Competence is the need for employees to feel effective, which is the case when they have opportunities to show their skills (Forner et al., 2020). Relatedness is about feeling connected to others (Deci & Ryan, 2017). When these needs are satisfied, individuals will be motivated to perform at work, which has been proven to lead to a higher performance (Deci & Ryan, 2017). The higher levels of motivation come from people's intrinsic drive for growth. The basic needs are crucial for psychological growth, the same as what nutrition and water are for physical health (Deci & Ryan, 2017).

The self-determination theory can provide valuable insights into the relationship between authentic leadership and employee performance, as Ilies et al. (2005) link authentic leadership to focusing on follower well-being, with Schoofs et al. (2023) confirming that authentic leadership leads to the fulfillment of followers' psychological needs. Moreover, psychological empowerment is closely aligned with the concepts of self-determination theory, given the overlap of competence and self-determination (autonomy). Therefore, this theory provides an interesting lens to develop a comprehensive understanding of these effects.

2.2.4 The Mediating Role of Psychological Empowerment

In this thesis, it is proposed that psychological empowerment mediates the relationship between authentic leadership and employee performance. Firstly, it is expected that a higher perceived authentic leadership will lead to higher levels of the core aspects of psychological empowerment (meaning, competence, self-determination and impact). An increase in meaning is expected, as Shapira-Lishchinsky and Tsemach (2014) argue that authentic leaders treat employees with respect. As being respected is important for employees, it is expected that this will align with their own values, leading to a stronger sense of meaning (Wiley & Kowske, 2011). Furthermore, Wong & Laschinger (2013) suggest that authentic leadership provides opportunities to develop new skills. It provides employees with learning opportunities that employees perceive as thriving (Zhang et al., 2021). By learning new skills, it is expected that employees will develop an increased belief in their competencies.

It can also be expected that a higher perceived authentic leadership leads to higher levels of self-determination and impact. This is because authentic leadership is characterized by leaders with self-awareness. Decisions are not purely based on their own knowledge, as these leaders are aware of their weaknesses. Because of this, these leaders empower employees to make a meaningful impact, by giving them autonomy (Zhang et al., 2021). As a result, employees' sense of autonomy (self-determination) is expected to be higher in case of a higher perceived authentic leadership. For impact this is expected, as employees' perspectives are more often included in the decision-making process (Wong & Laschinger, 2013). Also, Walumbwa (2008) argues that authentic leaders take the opinions of employees seriously. It is expected that this will give employees the feeling that they have an impact on the organization's results.

Looking through a self-determination theory lens, this higher level of psychological empowerment is expected to lead to a higher employee performance. Self-determination

theory indicates that the fulfillment of psychological needs (autonomy, competence and relatedness) creates a higher level of motivation, as these needs are fundamental aspects of the psychological functioning of humans. Firstly, a higher level of psychological empowerment means a higher level of competence and autonomy (seen as self-determination). As these two aspects are also fundamental psychological needs, higher levels of psychological empowerment will ensure that these two fundamental psychological needs are fulfilled. It is also expected that psychological empowerment leads to the fulfillment of relatedness. Seo (2023) indicates that impact is related to a sense of belonging, having a higher connectedness. This is because people who have substantial influence in an organization identify more strongly with the organization, which creates a heightened sense of connectedness (Seo, 2023) As a result, psychological empowerment is expected to lead to the fulfillment of these fundamental aspects of human psychological functioning, resulting in an increased motivation. The meta-analysis of Cerasoli et al. (2014) demonstrates that motivation is strongly related to performance. This leads to hypothesis 3:

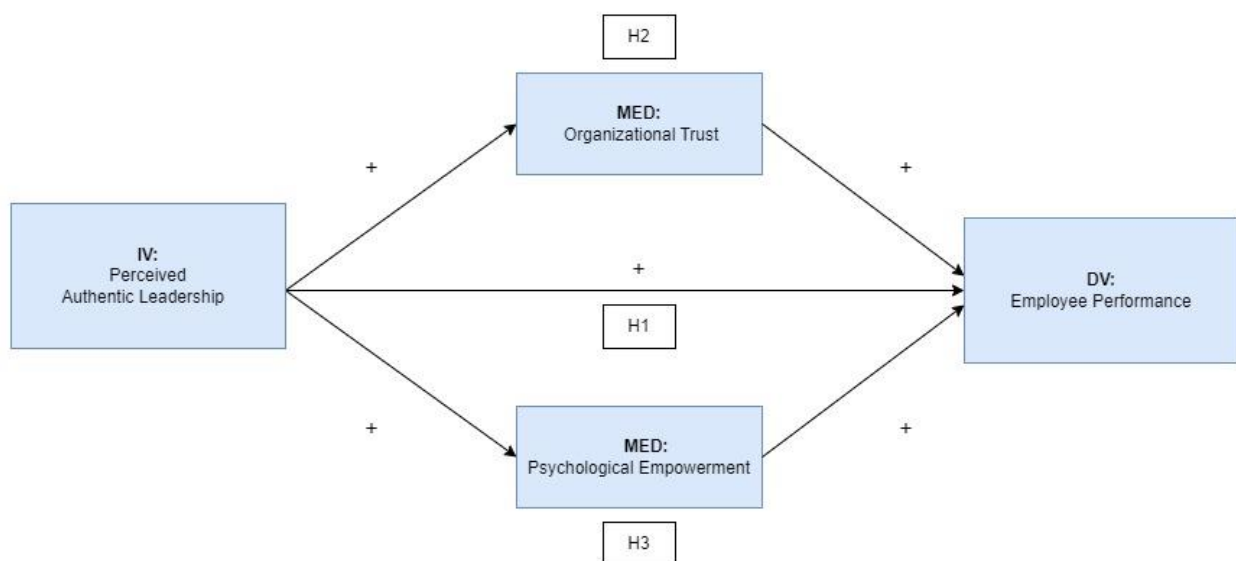
H3: Psychological empowerment mediates the positive relationship between authentic leadership and employee performance.

2.3 Conceptual Model

Based on the literature, the following conceptual model has been drawn up in Figure 1:

Figure 1

Conceptual Model



3. Methodology

In this chapter, the research design will be discussed first. After that, both the required and actual sample size will be outlined and the demographics of the sample will be compared with the population. Subsequently, the instruments used for the measurement of the variables will be discussed, along with the translation process. At the end of this chapter, the survey procedure, the use of a parallel mediation model and research ethics will be addressed.

3.1 Research Design: Online Survey

In this thesis, quantitative research was conducted using an online survey. This method was chosen in alignment with prior research investigating potential mediating variables in the relationship between authentic leadership and employee performance (e.g. Leroy et al., 2015; Duarte et al., 2021). Online surveys are popular due to their numerous advantages, such as reaching a large sample easily at low costs (Regmi et al., 2017). In addition, online surveys can be conducted in a rapid way, minimizing the time required for data collection. They also provide convenience, as respondents can complete the survey at their own pace and at a time that suits them (Evans & Mathur, 2005). However, as online surveys are self-administered, it can lead to unclear answer instructions (Evans and Mathur, 2005). As a result, respondents have a higher likelihood of leaving the survey before the end. To address this, pilot tests were used to ensure the clarity of instructions and to identify improvements.

3.2 Sample and Population

3.2.1 Required Sample Size and Sampling Procedure

The population of this thesis is the Dutch workforce employed under a supervisor, as this thesis examines perceptions of authentic leadership. To make statements about this population, individuals in the sample must have a job with a supervisor in the Netherlands and/or at a Dutch company. The age range of 15 to 75 years was used, based on the classification by CBS (2024), considering that it is probably difficult to complete a survey or understand its components for individuals outside of this age range.

Sampling was done using convenience sampling, which involved inviting respondents through social media and in-person interactions. With convenience sampling, respondents are selected based on their easy accessibility to the researcher, often being situated near the researcher (Etikan et al., 2016). This makes this method a quick and easy way to gather participants (Obilor, 2023). However, this method has drawbacks, because selection biases

can occur. This can lead to a low generalizability, as participants in the study might be a bad representation of the population (Emerson, 2021).

To address the problem of representativeness, several approaches were used to mitigate the negative effects of this method. For example, screening conditions were shown to the respondents at the beginning of the survey. If they did not meet the criteria, they were directed to the end of the survey. In addition, demographical and other potential influencing variables were included as covariates to control for potential confounding variables, increasing the precision of estimates and reducing selection biases (Trutschel et al., 2017). Consequently, the true effect of the variable that is studied can be better isolated. Also, a larger sample size than required is used, to improve the generalizability of the results (Emerson, 2021).

The required sample size was calculated using the Monte Carlo approach (see Schoemann et al., 2017). This method was chosen as the Monte Carlo approach can estimate power for all individual parameters, and is seen as the best practice for calculating the sample size in mediation models (Thoemmes et al., 2010). Moreover, it provides more accurate results in case the intended sample size is smaller (Thoemmes et al., 2010). The target power was set at .80, as this is often considered a perfect target power for studies (Serdar et al., 2021). Based on prior studies, the hypothesized correlations were applied to the paths in the parallel mediation model, resulting in a required sample size of 83. Moreover, Memon et al., (2020) suggest that students should use a 15 to 20:1 ratio as a sample-to-variable ratio, to avoid underpowered studies. This confirms the minimum required sample size of 83. However, this number is the absolute minimum to make reliable statements. To improve statistical power and counteract the negative effects of using a convenience sample, the aim was to significantly exceed this number.

3.2.2 Final Dataset and Sample Size

The initially transferred dataset from Qualtrics consisted of 150 respondents. The data cleaning process involved several steps to determine the final sample size. 36 respondents who did not complete the survey, as well as three respondents who did not meet the screening conditions, were removed. The answers to the control statements were analyzed to see if respondents answered the questions in an automatic manner. A respondent filled in '7' for all items of the first two sets of statements, including the control statements. Therefore it was decided to remove this respondent too. A total of four different cases were identified as outliers (see Appendix A1). The answers of these individual cases were analyzed, giving no

reasons to think that there were any data entry or measurement errors (based on for example the logicalness of the answers, duration time and how the demographic questions were answered). It was decided to keep them in the dataset, as true outliers represent natural variation (Mahapatra et al., 2020). After cleaning the dataset, the sample used for the analysis consisted of $n = 110$.

3.2.3 Comparing the Sample Demographics with the Population

Table 1 shows that the respondents in the final sample ($n = 110$) consist of 53.6% males and 46.4% females. Regarding their highest levels of education, 10% had ‘Middelbare School’, 21.8% had ‘Middelbaar Beroeps Onderwijs’, 41.8% had ‘Hoger Beroeps Onderwijs’ and 26.4% had ‘Wetenschappelijk Onderwijs’. Most respondents were 15 to 34 years old (68.2%), but 20.9% were 35 to 54 years old and 10.9% were between 55 and 75 years old.

Looking at the population, CBS (2024) indicates that the Dutch active labor force characterized as employees consists of 50.5% men and 49.5% women, closely aligning with the sample (see Table 1 and Appendix A1.5). However, looking at education and age, there is a bigger difference. While the population consists of for example 40.1% highly educated individuals, the final sample consists of 68.2% highly educated individuals (41.8% ‘HBO’ + 26.4% ‘WO’). In addition, 41.3% of the population is aged between 15 and 34 years, in contrast to 68.2% in the sample. Due to the convenience sample, the group aged 15 to 34 is over-represented in the sample, while the groups aged 35 to 55 and 55 to 75 are under-represented.

In conclusion, the sample differs from the population regarding age and education, due to the use of a convenience sample. Therefore, it is important to interpret the results of this study with caution. However, as a robustness check, the main analysis is also run with only the age groups that would count more heavily. If the same effects are significant for only these age groups (35 to 54 and 55 to 75 years old), there is a higher chance that when these groups receive a higher weighting, the same effects will be significant.

Table 1*Sample Demographics*

Gender	N	(%)	Population (%)	Education (Thesis)	N	(%)	Education (CBS)	Population (%)	Age	N	(%)	Population (%)
Male	59	53.6	50.5	Secondary School	11	10	Low	21.5	15 – 34	75	68.2	41.3
Female	51	46.4	49.5	MBO	24	21.8	Medium	38.4	35 – 54	23	20.9	38.0
				HBO	46	41.8	High	40.1	55 - 75	12	10.9	20.7
				WO	29	26.4						
				High (CBS)	75	68.2						
Total	110											

3.3 Measures

Respondents indicated the extent to which they agreed with the items by the use of a 7-point Likert scale (1 = 'Strongly Disagree' to 7 = 'Strongly Agree'). This is because Taherdoost (2019) suggests using a 7-point scale, as this scale is better able to reflect the true subjective evaluation of respondents and because it is often seen as more accurate than other scales. To calculate the composite values of the variables, the arithmetic mean was taken by averaging the items of the measuring instruments.

3.3.1 Employee Performance

Employee performance was measured by the use of the Self-Reported Work Performance Scale by Kuvaas (2006), as research by Kock (2017) indicates that self-reported measurement instruments for assessing job performance demonstrate good validity and reliability and can be seen as a better approach to measure job performance, compared to for example supervisor scores (Kock, 2017). The scale consists of six items (e.g. 'I deliver higher quality than what can be expected') that measures the respondent's perception of their own job performance. The respondents were asked to indicate to what extent they agreed with the statements, looking at their current job. The Cronbach's Alpha indicated a composite reliability of .74 in Kuvaas (2006) and .82 in Shahzad et al. (2018). The scale was translated according to the method mentioned in 3.3.6. Appendix B1 presents the measurement instrument and the translated version.

3.3.2 Perceived Authentic Leadership

Neider and Schriesheim's (2011) Authentic Leadership Inventory was used to measure perceived authentic leadership. Adapted from the work of Walumbwa et al. (2008), this inventory was developed and validated to address concerns regarding construct validity

(Neider & Schriesheim, 2011). The Authentic Leadership Inventory consists of 14 items, to assess the four dimensions of authentic leadership. The respondents were asked to indicate to what extent they agreed with the statements. The first two dimensions are self-awareness (e.g. 'My leader is clearly aware of the impact he/she has on others') and relational transparency (e.g. 'My leader expresses his/her ideas and thoughts clearly to others'). The other two dimensions are balanced information processing (e.g. 'My leader encourages others to voice opposing points of view) and internalized moral perspective (e.g. 'My leader resists pressures on him/her to do things contrary to his/her beliefs').

Respondents were instructed that 'leader' refers to their most direct supervisor. In Neider and Schriesheim (2011), the Cronbach's Alpha ranged from .74 to .85, showing acceptable reliability. Because the survey is being distributed in Dutch, the developed and validated Dutch version of Mortier (2017) was used. This Dutch version had a Cronbach Alpha of .89 and .90 in both tested samples. Appendix B2 presents the original measurement instrument along with the Dutch version based on Mortier (2017).

3.3.3 Organizational Trust

Drawing on prior research, organizational trust was measured by the use of the measurement instrument developed by Huff and Kelley (2003). This scale consists of four items (e.g. 'There is a very high level of trust throughout this organization'). This instrument measures trust levels throughout the organization, including trust among employees and trust towards managers. Based on this, it provides a good picture of the broader climate of trust within the organization, as perceived by employees. Respondents were asked to what extent they agreed with the statements, looking at the organization they were working for. The measurement instrument showed acceptable Cronbach's Alphas of .79 in Huff & Kelley (2003) and .85 in Joo et al. (2022). The scale was translated according to the procedure mentioned in 3.3.6. Appendix B3 presents the measurement instrument and the translated version.

3.3.4 Psychological Empowerment

Spreitzer's (1995) Psychological Empowerment Questionnaire was used to measure psychological empowerment. This scale consists of twelve items, based on four dimensions of psychological empowerment. These dimensions are meaning (e.g. 'The work that I do is important to me'), competence (e.g. 'I have mastered the skills necessary for my job') self-determination (e.g. 'I can decide on my own how to go about doing my work') and impact (e.g. 'I have a great deal of control over what happens in my department').

Respondents were asked to rate the extent to which they agreed with the statements, considering their current job. The Cronbach's Alphas for the four dimensions averaged .84 in Spreitzer et al. (1999) and .89 in Hancer et al. (2005). For the context of this research, the version developed for the Netherlands by Faber et al. (2006) was used. This Dutch version had a Cronbach's Alpha of .86. Appendix B4 presents both the original measurement instrument and the Dutch version. A summarizing measurement table can be found in Appendix B5.

3.3.5 Inclusion of Control Variables

Job satisfaction and organizational tenure are included as control variables, to ensure that the results of this study are not influenced by unaccounted variables. Kauppila (2024) indicates that job satisfaction influences employees' perceptions of leaders. As Katebi et al. (2021) argue that job satisfaction also has a positive relationship with job performance, this indicates that this variable could potentially influence the outcomes. Steffens et al. (2014) argue that the number of years a person works for a company affects employee performance. As Beak et al. (2019) demonstrate that organizational tenure influences the effects of employees' perceptions of authentic leadership, this variable could also influence the outcomes. Moreover, prior research on mediators in the relationship between authentic leadership and employee performance also included organizational tenure as a control variable (Wang et al., 2014). Demographical variables such as age, gender and educational level were also considered, as they could potentially have influenced perceptions of leadership and other variables. This made sure that the observed effects were not due to demographic differences.

3.3.6 Translation of Measurement Items

When using developed measurement instruments in a different population, accurate translation is of great importance (Yu et al., 2004). Incorrect translation can affect the validity and reliability of the research (Chang et al., 1999). Existing Dutch validated versions were used for measuring perceived authentic leadership and psychological empowerment. The items measuring employee performance and organizational trust were manually translated. A second translator unaware of the questionnaire's objective and proficient in the English language was utilized, making it possible to find subtle differences (Tsang et al., 2017). Translations from previous Master's Theses were also included, resulting in a table with 3 translations for every item (Nijzink 2010; Hoogenboom 2017). If these three translations were the same, this translation would be provisionally used. In case of differences, the best option

was chosen with the second translator. Both the author and the second translator back-translated the translation the following day to identify further inconsistencies (Tsang et al., 2017).

3.4 Procedure

3.4.1 Set-up of the Survey

The online survey was conducted using Qualtrics. First, participants were informed that participation was voluntary and anonymous, and that they could stop at any time. Next, informed consent was requested for research participation. If respondents entered 'no', they were directed to the end of the survey. After that, a screening question was presented, along with demographic and control questions. If respondents entered 'no' (for the screening question) or 'prefer not to say' (for the demographic questions), they were directed to the end of the survey. Subsequently, statements regarding perceived authentic leadership, organizational trust, psychological empowerment and employee performance were presented. For every measurement instrument, these statements were placed in randomized order and a control statement was added. At the end, a word of thanks was expressed to the respondents. The final version of the survey can be found (in Dutch and English) in Appendix C.

3.4.2 Use of Pilot Tests

A pilot test was conducted with three individuals. Testing this survey on a small scale is important to identify potential problems and weaknesses related to the survey. This involves examining whether the instructions are clear, the answer options are appropriate and whether there are any technological errors (Kasunic, 2005). Based on these pilot tests, several changes were made, such as changes in the page layouts (looking at the number of questions) and adding an explanation of the 'please answer' notification.

3.4.3 Choice for Parallel Mediation

The analysis was done through the use of a parallel mediation model, as theoretical reasons emerged to expect that two unexplored variables could explain the relationship between perceived authentic leadership and employee performance. This method offers advantages compared to multiple single mediation models, by providing a more complete picture of the dynamics (Sarstedt et al., 2020). In single mediation models, the accuracy of confidence intervals computed for particular indirect effects can be inaccurate, because other mediators are excluded and as mediating variables often correlate. Consequently, summing the indirect effect to obtain the total indirect effect may introduce bias (Hair et al., 2021). Parallel mediation also makes it possible to compare the indirect effects, showing which mediator is

more important (Hayes, 2022). Based on this, Hair et al. (2021) suggest examining all mediating variables in one parallel mediation model.

3.4.4 Research Ethics

Taking research ethics into account is important to protect the dignity of respondents (WHO, 2024). Looking at the conduct of the researcher in the field, several essential steps and guidelines were implemented throughout the study to ensure a fair and respectful treatment of participants. For example, the survey began with an extensive introduction that explicitly stated the objectives of the survey, the intended use of the data and that participation was voluntary. Respondents were also told that they could stop filling out the survey at any time. In addition, respondents were asked for informed consent to participate.

Given the potential sensitivity of questions concerning employees' supervisors and their own performance, the survey was processed completely anonymously, meaning that IP addresses were not recorded. This made it possible to state in the introduction that results cannot be traced back to individuals, to prevent respondents from feeling uncomfortable and not answering honestly. In addition, participants' privacy was further ensured by designing the survey questions in a way that prevents the identification of individuals. An example of this is that age was asked in ranges instead of a specific age. Regarding the analysis, all the relevant data and steps followed in the analyzing process are documented in the appendices and in a syntax file, enabling replication of the research steps and ensuring verifiability.

4. Results

This chapter will first examine a confirmatory factor analysis and look at the construct reliability. Subsequently, the assumptions will be checked. After that, the main analysis will be conducted and a statistical model will be drafted.

4.1 Preliminary Data-Analysis

4.1.1 Confirmatory Factor Analysis

A confirmatory factor analysis is performed in AMOS (see Appendix D1), based on Hair et al. (2018). This makes it possible to analyze whether the used indicators are loading on the expected concepts, to determine whether the model fits the collected data. It is important to keep in mind that the sample size is on the low side for conducting a confirmatory factor analysis, as a minimum sample size of 100 or 200 is generally recommended (Wolf et al., 2013). This is important because some of the main fit statistics become better with a larger sample size. For example, the RMSEA tends to decrease and the CFI tends to increase with a larger sample size (Goretzko et al., 2024). For this reason, too much weight cannot be placed on the confirmatory factor analysis. However, if the fit statistics seem to be acceptable for this sample size already, it suggests that the model fit for this sample size is likely to be adequate.

Table 2 shows that this higher-order model displays reasonably acceptable fit statistics at first sight (RMSEA = .07, SRMR = .10, CFI = .85). The RMSEA falls within the good range based on the index of Hair et al. (2018), the SRMR narrowly misses the threshold of a good fit value and the CFI is somewhat below the good fit cut-off value (see Table 2). Based on these considerations, it can be concluded that for the current sample size, the model shows an acceptable fit.

Table 2

Fit Statistics

Fit Indices	Measurement Model	Goodness-of-Fit values V > 30, N < 250
RMSEA	.07	< .08
SRMR	.10	< .09
CFI	.85	> .93

4.1.2 Construct Reliability

Cronbach's Alpha is often used to demonstrate the internal consistency of a scale, indicating the extent to which items measure the same construct. This is expressed with a value ranging from 0 to 1 (Tavakol & Dennick, 2011). Classifications for acceptable Alphas vary among authors, but those of DeVellis (2017) seem to be widely used. DeVellis (2017) states that an Alpha of .65 is the minimum acceptable value. Table 3 and Appendix D2 show the Cronbach's Alpha for all four main variables in the study. The measurement instruments of perceived authentic leadership, organizational trust and psychological empowerment have Cronbach's Alphas of .87, .86 and .86 respectively and employee performance has a Cronbach's Alpha of .83. These values are all considered 'very good' by DeVellis (2017). For all subdimensions of perceived authentic leadership and psychological empowerment, the Alpha is also above .65, except for Internalized Moral Perspective (.57) (see Appendix D3). Removing item 3 of this dimension leads to an increased Alpha of .66. Moreover, the item-total correlation of item 3 is very low (.15). With values below .20, an item is not representative of a particular construct (Piedmont, 2014). Therefore, it is decided to remove this item. As a result, all variables and subdimensions meet the minimum acceptable Alpha of .65.

Table 3

Descriptive Statistics, Correlations and Cronbach's Alphas

Variable	1	2	3	4	5	6	7	8	9
1. Gender	-								
2. Education	-.15	-							
3. Age	.18	-.37***	-						
4. Organizational Tenure	.05	-.17	.45***	-					
5. Job Satisfaction	-.21*	-.02	.06	-.16	-				
6. Perceived AL	-.26**	.10	.07	-.09	.48***	(.87)			
7. Organizational Trust	-.12	.07	-.07	-.20*	.45***	.60***	(.86)		
8. Psychological Emp.	-.13	-.07	.04	.03	.45***	.41***	.36***	(.86)	
9. Employee Performance	-.13	-.08	.26**	.14	.33***	.35***	.28**	.55***	(.83)
Descriptive									
Mean	1.46	2.85	1.43	2.94	5.25	4.59	4.88	5.01	5.04
SD	0.50	0.93	0.68	1.15	1.14	0.96	1.20	0.91	0.91
Min	1	1	1	2	2	1.08	1.25	2.75	2.50
Max	2	4	3	6	7	6	7	6.83	7

Note: Cronbach's Alphas are in parentheses along the diagonal. * $p < .05$, ** $p < .01$, *** $p < .001$

4.2 Regression-Based Parallel Mediation Model Assumptions

The regression-based technique utilized in this study comes with several assumptions that must be validated. These assumptions are normality, linearity, homoscedasticity and independence of errors in estimation. Moreover, for specific parallel mediation models, there should be no causal influence between the mediators (Hayes, 2022).

Normality implies that the errors in the estimation of variable Y are normally distributed, which can be tested by conducting QQ-plots (Hayes, 2022; Kane & Ashbaugh, 2017). It can be seen that for all the plots of the variables, the residuals follow the diagonal line nicely. Only the residuals of perceived authentic leadership slightly deviate from the line, but this is a small deviation. Therefore, this assumption is met (see Appendix D4.1). Linearity means that the relationships between the modeled variables are linear. When this assumption is not met, this can affect the regression coefficient's interpretation (Hayes, 2022). This needs to be tested for all simple and multiple regression models and is fulfilled when the Loess curve runs close to 0 (Kane & Ashbaugh, 2017). This assumption is met (see Appendix D4.2).

Homoscedasticity states that the errors in the estimation of Y are relatively equal (Hayes, 2022). The same model as in Appendix D.4.2.6 can be used, but now the residuals should be randomly scattered above and below the Loess curve. The model does not show a specific pattern: the residuals are randomly distributed. This means that this assumption is met. The independence of errors entails that the errors in the estimation should not be dependent, meaning that there should be no other reasons that could lead to errors in estimation (Hayes, 2022). Because there were reasons to believe that job satisfaction and organizational tenure could influence the results, they were included as control variables. As these variables are added, there are no reasons to believe that there are other underlying reasons that may influence the relationships.

For parallel mediation, the mediators are likely to and are allowed to correlate, but they are not allowed to have a causal influence on each other (Hayes, 2022). This can happen in case of a very high correlation between mediating variables (Kane & Ashbaugh, 2017). Pearson's Test shows a correlation of .38 between the mediators (see Appendix D4.3). When this value is between .30 and .70, there is a moderate level of a linear relationship (Ratner, 2009). Since this value is on the low end of a moderate relationship, it can be concluded that a causal influence is not the case.

4.3 Main Analysis: Parallel Mediation

Using Hayes Process Model 4, a parallel mediation analysis is run. This is a tool that applies regression-based path analysis, estimating the coefficients by the use of OLS regression (Hayes, 2012). This technique integrates regression analysis with path analysis, making it possible to estimate relationships among variables while accounting for the direct and indirect effects of a mediation model. Process makes it possible to generate these effects in one command (Hayes, 2012). This method uses bootstrapping to compute the indirect effects, to create an empirical representation of the sampling distribution. Mackinnon et al. (2004) argue that this is important, because the standard errors of the indirect effects are often not normally distributed. Therefore, more robust methods such as bootstrapping, which do not rely on this assumption, are necessary (Mackinnon et al., 2004). Bootstrapping therefore leads to higher statistical power than other often utilized methods (Hair et al., 2021).

4.3.1 Hypothesis Testing

Table 3 displays the descriptives, Spearman correlations and Cronbach's Alphas. This correlation matrix indicates that age is positively and significantly correlated with employee performance. Gender is significantly negatively correlated with perceived authentic leadership and organizational tenure is negatively correlated with organizational trust. Job satisfaction has a significant positive correlation with all the main variables. Moreover, the main variables are significantly and positively correlated with each other.

Table 4 presents the results of the parallel mediation analysis. Model 1 displays the results of the model with employee performance as the outcome variable without the inclusion of organizational trust and psychological empowerment in the model. Model 2 shows the results of the model with organizational trust as the outcome variable, while Model 3 presents the results of the model with psychological empowerment as the outcome variable. Model 4 incorporates the full model of the effects on employee performance as the outcome variable in the presence of the mediators. Appendix E1 shows the complete results of the parallel mediation analysis.

Hypothesis 1 proposed a positive relationship between perceived authentic leadership and employee performance, serving as a baseline for exploring the mediation effects of organizational trust and psychological empowerment in subsequent hypotheses. Therefore, Model 1 in Table 4, which excludes the mediators, is used for the analysis. The results show that the effect of perceived authentic leadership on employee performance is statistically

significant ($\beta = .24$; $p < .05$) (see Model 1 in Table 4). This indicates a positive association between perceived authentic leadership and employee performance, suggesting that an increase in perceived authentic leadership may lead to an increase in employee performance. Based on this, hypothesis 1 is accepted.

Table 4

Parallel Mediation Results

	Organizational Trust		Psychological Empowerment		Employee Performance Model 1	
Total Effects	B	SE	B	SE	B	SE
Constant	-	-	-	-	2.82***	.67
Perceived Authentic Leadership	-	-	-	-	.24*	.10
Gender	-	-	-	-	-.15	.17
Education	-	-	-	-	-.03	.09
Age	-	-	-	-	.21	.14
Organizational Tenure	-	-	-	-	.08	.08
Job Satisfaction	-	-	-	-	.17*	.08
Model Statistics						
R^2					.23	
F					5.12***	
Direct Effects	Model 2		Model 3		Model 4	
Constant	.67	.70	2.70***	.65	1.42*	.65
Perceived Authentic Leadership	.79***	.10	.31**	.10	.02	.11
Organizational Trust	-	-	-	-	.08	.08
Psychological Empowerment	-	-	-	-	.50***	.09
Gender	.20	.17	-.01	.16	-.16	.15
Education	.00	.09	-.12	.09	.03	.08
Age	-.08	.15	-.13	.14	.28*	.13
Organizational Tenure	-.12	.08	.07	.08	.06	.07
Job Satisfaction	.14	.09	.24**	.08	.04	.07
Model Statistics						
R^2	.52		.29		.42	
F	18.70***		7.10***		8.96***	
Indirect Effects	Effect		BootLLCI		BootULCI	
Total	.22		.03		.42	
AL- > OT- > EP	.06		-.07		.20	
AL- > PE- > EP	.15		.04		.30	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Hypothesis 2 proposed that organizational trust mediates the relationship between perceived authentic leadership and employee performance. Results based on a 95% confidence interval using 10,000 bootstrapping samples indicate that organizational trust does not mediate this relationship (see indirect effects in Table 4). The indirect effect through organizational trust is not statistically significant, as the 95% Confidence Interval includes zero: 95% CI [-.07, .20].

Model 2 indicates that the first component of this indirect effect, the effect of perceived authentic leadership on organizational trust, is statistically significant ($\beta = .79; p < .001$). However, Model 4 indicates that the effect of organizational trust on employee performance is not statistically significant ($\beta = .08; p = .34$). The results show that perceived authentic leadership is positively associated with organizational trust, but a higher organizational trust is not significantly associated with a higher level of employee performance. Based on this, hypothesis 2 is rejected.

Hypothesis 3 proposed that psychological empowerment mediates the relationship between perceived authentic leadership and employee performance. The results confirm this hypothesis, as the indirect effect through psychological empowerment is statistically significant: 95% CI [.04, .30] (see indirect effects in Table 4). The results of Model 3 show a positive association between perceived authentic leadership and psychological empowerment ($\beta = .31; p < .05$). Additionally, Model 4 shows that a higher psychological empowerment is associated with a significantly higher employee performance ($\beta = .50; p < .001$), indicating a mediating role of psychological empowerment. Based on this, hypothesis 3 is accepted.

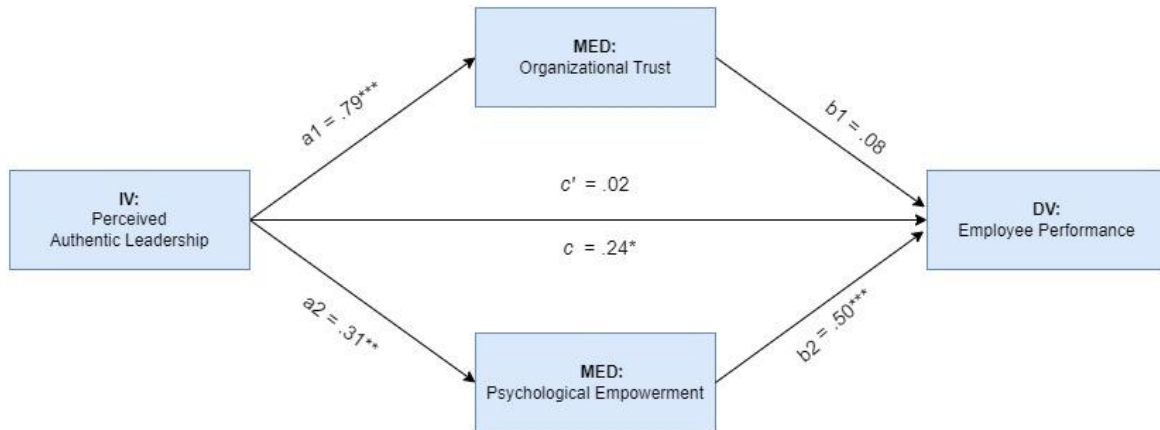
In summary, hypotheses 1 and 3 are accepted, but hypothesis 2 is rejected. The full model (Model 4) is explaining 42% of the unique variance in employee performance ($R^2 = .42$). The results of the hypotheses are illustrated in Figure 2.

4.3.2 Influence of Control Variables

The influence of the control variables in the models is limited (see Table 4). Age shows a significant effect in Model 4 with employee performance as the outcome variable ($\beta = .28; p < .05$). Additionally, job satisfaction is significant in Model 1 with employee performance as the outcome variable ($\beta = .17; p < .05$), and in Model 2 with psychological empowerment as the outcome variable ($\beta = .24; p < .01$). The remaining control variables do not show a significant influence in any of the models.

Figure 2

Statistical Model



* $p < .05$, ** $p < .01$ and *** $p < .001$

4.4 Robustness Check: Subgroup Analysis

Due to the use of a convenience sample, the analysis is also run for only the groups that would be assigned a higher weight (35 to 54 and 55 to 75 years old). Appendix E2 shows that the same effects are statistically significant (the total effect of perceived authentic leadership on employee performance and the mediating effect of psychological empowerment). As a result, it can be expected that with a higher weight for these groups (and lower weights for 15 to 34 years old), it will be likely that there are no changes in the significance of the effects.

5. Discussion, Contributions and Limitations

This final chapter will first draw conclusions and discuss reasons for differences with the hypothesized effects. Subsequently, contributions to existing knowledge and managerial implications will be addressed. The chapter will end with discussing the limitations of the study and proposing directions for future research.

5.1 Discussion

5.1.1 Relationship between Perceived Authentic Leadership and Employee Performance

This study's findings indicate that perceived authentic leadership has a positive relationship with employee performance, supporting hypothesis 1. This aligns with the findings of prior research (e.g. Wang et al., 2014; Banks et al., 2016; Duarte et al., 2021). Authentic leadership characteristics, such as transparency, positivity and strong ethical standards are perceived positively by employees (Walumbwa et al., 2021). Consequently, they feel a need to repay this positive behavior by improving their performance (Duarte et al., 2021).

5.1.2 Organizational Trust as Mediating Variable

Hypothesis 2 proposed that organizational trust mediates the relationship between perceived authentic leadership and employee performance, based on social exchange theory. Existing literature suggests that authentic leadership enhances organizational trust, as authentic leaders' self-awareness and relational transparency lead to the sharing of weaknesses, fostering trust (Almazrouei, 2023). Balanced processing leads to thoughtful decisions and predictable actions, while an internalized moral perspective promotes an ethical climate, both contributing to trust (Clapp-Smith et al., 2009; Ascigil & Parlakgumus, 2012). As social exchange theory suggests that favorable treatments within organizations are often reciprocated by a higher employee performance and trust is considered an essential aspect of the creation of positive work attitudes among employees, it was expected that organizational trust would be seen as a favorable treatment and that it would be reciprocated by employees with a higher performance (Cropanzano et al., 2017; Yadav, 2016).

However, the findings suggest that organizational trust does not mediate the positive relationship between perceived authentic leadership and employee performance, rejecting hypothesis 2. Although perceived authentic leadership is associated with a higher organizational trust, this subsequently does not result in a significantly higher employee performance, contrary to the findings of for example Verburg et al. (2017). A higher

organizational trust is only an outcome of a higher perceived authentic leadership but does not enhance employee performance.

A possible explanation for why organizational trust does not lead to a higher employee performance lies in the essence of social exchange theory. Mitchell et al. (2012) argue that individuals in social exchanges aim to: 'maximize personal gains at minimum cost' (p.100). As more people in an organization benefit from higher levels of organizational trust, this gain can be seen as a more general and collective benefit (a group gain) instead of a personal gain. This means that it lacks an interpersonal exchange, which is typical for social exchanges, as there is no initiation towards a specific target (Cropanzano et al., 2017). Consequently, there is not a personal exchange relationship between employer and employee and employees will not feel a need to reciprocate with better performance. Ahmad et al. (2023) call for further investigation of such gains within social exchange theory, indicating that these contexts are unexplored and could give different outcomes.

Herzberg's two-factor theory can also provide a possible explanation. It distinguishes between motivators (intrinsic factors like recognition, achievement and growth opportunities) and hygiene factors (extrinsic factors like salary, interpersonal relationships and working conditions). Motivators can enhance job satisfaction and performance, while hygiene factors can only cause dissatisfaction when inadequate. However, an increase in these factors does not motivate people to perform better at certain levels. Organizational trust can be categorized into interpersonal relationships and working conditions, making it an example of a hygiene factor. Thus according to the two-factor theory, increasing organizational trust when an adequate level is already reached does not lead to an increase in motivation and employee performance. However, a shortage of this extrinsic factor may lead to dissatisfaction and reduced motivation (Herzberg, 2003).

Self-determination theory can also provide clarifications. This theory indicates that psychological need satisfaction (autonomy, competence and relatedness) is crucial for enhancing employee performance through motivation (Deci & Ryan, 2017). A higher organizational trust may boost relatedness, but there is no evidence that it affects autonomy and competence. Fulfilling all these needs is necessary to drive an individual's well-being, motivation and performance (Deci & Ryan, 2017). Hence, as a higher organizational trust does not help to fulfill these psychological needs, an increase in organizational trust does not lead to a significant increase in employee performance.

5.1.3 Psychological Empowerment as Mediating Variable

Hypothesis 3 proposed that psychological empowerment mediates the relationship between perceived authentic leadership and employee performance, based on self-determination theory. Existing literature suggests that higher perceived authentic leadership leads to higher levels of psychological empowerment, as authentic leaders treat employees with respect, enhancing their sense of meaning (Shapira-Lishchinsky & Tsemach, 2014). They also provide opportunities for skill development, boosting employees' beliefs in their competencies and they give employees more autonomy, leading to a higher self-determination (Zhang et al., 2021). Furthermore, as authentic leaders consider employees' opinions, employees think they have a higher impact (Walumbwa et al., 2008). Self-determination theory suggests that this psychological empowerment fulfills the fundamental needs of autonomy, competence and relatedness, leading to a higher motivation and employee performance (Deci & Ryan, 2017; Cerasoli et al., 2014). This is because competence and autonomy (self-determination) are two aspects of psychological empowerment. Higher relatedness is expected because a higher impact ensures that people identify more strongly with the organization (Seo, 2023).

The findings show that psychological empowerment mediates the relationship between perceived authentic leadership and employee performance, supporting hypothesis 3. This aligns with previous findings by other authors (e.g. Towsen et al., 2020; Juyumaya, 2022). Drawing from self-determination theory, it can be concluded that higher levels of perceived authentic leadership lead to higher levels of psychological empowerment. This fulfills the fundamental needs of individuals, leading to a higher employee performance.

5.1.4 Answering the Research Question

In conclusion, this study examined whether the relationship between perceived authentic leadership and employee performance is mediated by the effects of organizational trust and psychological empowerment, by addressing the following research question: *'What role do organizational trust and psychological empowerment play in the relationship between perceived authentic leadership and employee performance?'*

The findings show that organizational trust is an outcome of perceived authentic leadership, but that it does not play a role in the explanation of the relationship between perceived authentic leadership and employee performance. Psychological empowerment does play a specific role in the relationship between perceived authentic leadership and employee performance, as the results display that psychological empowerment mediates this effect.

5.2 Contributions to Academic Knowledge

This study contributes to the literature that aims to understand the relationship between perceived authentic leadership and employee performance by exploring the mediating effects of organizational trust and psychological empowerment. This is necessary given the limited research on mediating variables in this relationship. It addresses the call by Gardner et al. (2011) for an expansion of the nomological network of the effects of authentic leadership on employee outcomes, by demonstrating that psychological empowerment can explain the effect of perceived authentic leadership on employee performance and that organizational trust emerges as an outcome of perceived authentic leadership. Moreover, the theoretical grounds of a potential mediating effect of organizational trust and psychological empowerment have now been empirically examined using social exchange and self-determination theory, helping to address the gap in research identified by Gardner et al. (2011) between the theoretical and empirical network regarding authentic leadership.

5.3 Managerial Implications

In addition to the implications for academic knowledge, the results of this research also have implications for practitioners. Firstly, this thesis provides evidence that a higher perceived authentic leadership is associated with a higher employee performance. This makes it important for organizations to consider the authenticity of individuals when selecting or developing leaders, as employee performance is crucial for company performance (Vosloban, 2012). First of all, when hiring new leaders, the authenticity of these candidates should be taken into account. In addition, as leaders can be developed, organizations should design leadership development and training programs to develop leaders with a high level of authenticity and to promote authenticity (Ericsson et al., 2007). These leadership development programs can offer substantial benefits, but only when done right (Yemiscigil, 2023). This makes it crucial to know the underlying mechanisms to implement this in the programs. Psychological empowerment should be integrated into them to improve the likelihood of achieving benefits.

Findings from this research also suggest that if companies want to improve employee performance independently of authentic leadership, this can be done by increasing psychological empowerment. Lastly, if organizations or specific departments (for example HR) want to focus on maximizing organizational trust and psychological empowerment, the results of this study show that developing authentic leadership can contribute to this.

5.4 Reflection on Limitations and Recommendations for Future Research

There are limitations associated with this research, suggesting directions for research in the future. Firstly, the sample used in this study presents two issues. The convenience sample leads to an overrepresentation of individuals aged 15 to 34 and those with higher educational levels. This leads to a weak generalizability of the results, despite efforts to address this by using screening conditions, adding covariates, increasing the sample size and performing a robustness test. Additionally, although the sample meets the required minimum sample size, it is relatively small. This reduces the power of the study (Serdar et al., 2021). To have a better generalizability and accuracy of sample estimates, future research with a more representative and larger sample is important.

The use of an online survey also has limitations. The complete prevention of external effects is not possible, as it is for example difficult for respondents to ask questions when they do not understand questions or concepts. However, efforts are made to prevent these effects as much as possible by including an email address for questions and by using pilot tests. Additionally, there is no guarantee that all respondents have read the instructions carefully, which can lead to some data inaccuracies. Moreover, employee performance is measured by asking employees about their own performance. Although Kock (2017) indicates that this is a more reliable method than supervisor ratings, it can still lead to non-visible self-report biases. This makes it important for future studies to also ask supervisors to rate their employees.

In addition, authentic leadership was measured by perceived authentic leadership. Although Laguna et al. (2019) argue that employees' perceptions of a leader's authenticity are a more reliable source than leaders' self-perceptions, these subjective interpretations might not always accurately reflect the true authenticity of leaders. Future research should include leaders' self-perceptions, to provide a more complete understanding of the effects of authentic leadership, addressing the limitations of relying only on employees' perceptions.

Apart from these limitations, the findings also open other paths for future research. A higher organizational trust did not lead to a higher employee performance in this study, possibly because it is perceived as a group gain instead of a personal gain, not leading to an exchange relationship. This suggests that higher levels of interpersonal trust from an authentic leader towards an employee could potentially explain this relationship. This is because trust in this context is a personal gain, leading to a social exchange relationship. Therefore, future research should focus on investigating trust as a mediator in this relationship.

Finally, future research may gain benefits from combining the results of prior studies on mediating variables (leader-member exchange based on Wang et al. (2014), basic need satisfaction based on Leroy et al. (2015) and effective commitment and individual creativity based on Duarte et al. (2021)) together with psychological empowerment in a parallel mediation model. This comprehensive model would examine how the relationship between perceived authentic leadership and employee performance exactly arises, making it possible to identify the most important mediators, as parallel mediation indicates which mediators are the strongest and most influential (Hayes, 2022).

5.5 Concluding Remarks

In conclusion, this study advances existing research on the relationship between perceived authentic leadership and employee performance, by exploring the mediating effects of organizational trust and psychological empowerment. The results show that organizational trust does not explain the relationship, as a higher organizational trust is not associated with a significantly higher employee performance. However, the results confirm that psychological empowerment explains the relationship between perceived authentic leadership and employee performance. Hopefully, this study sets the stage for other researchers to develop a comprehensive model that illustrates how authentic leadership enhances employee performance.

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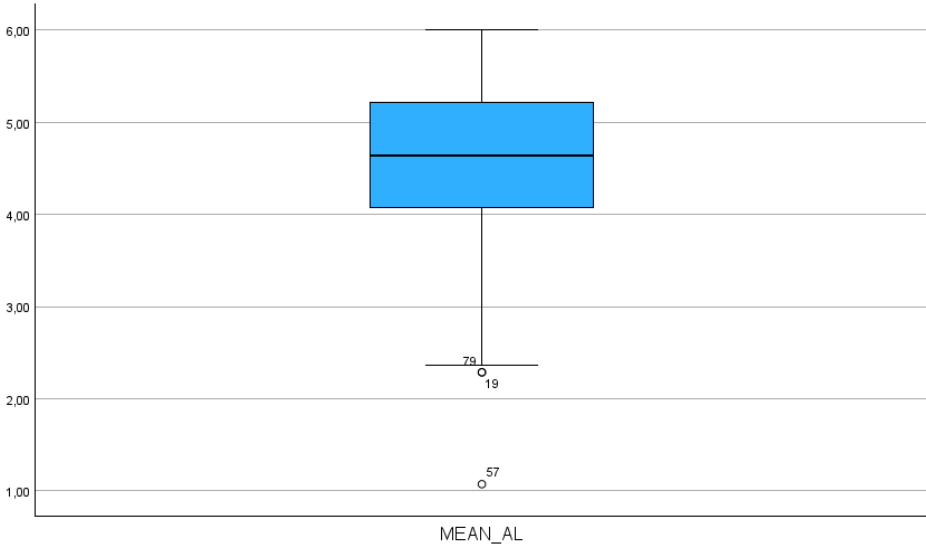
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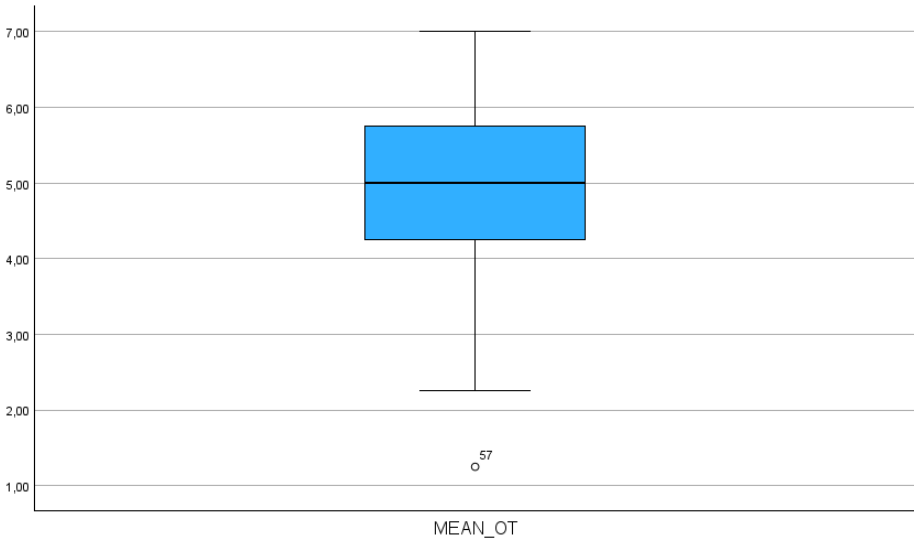
Appendix A: Sample Size and Sample versus Population Comparison

A1. Overview of Outliers

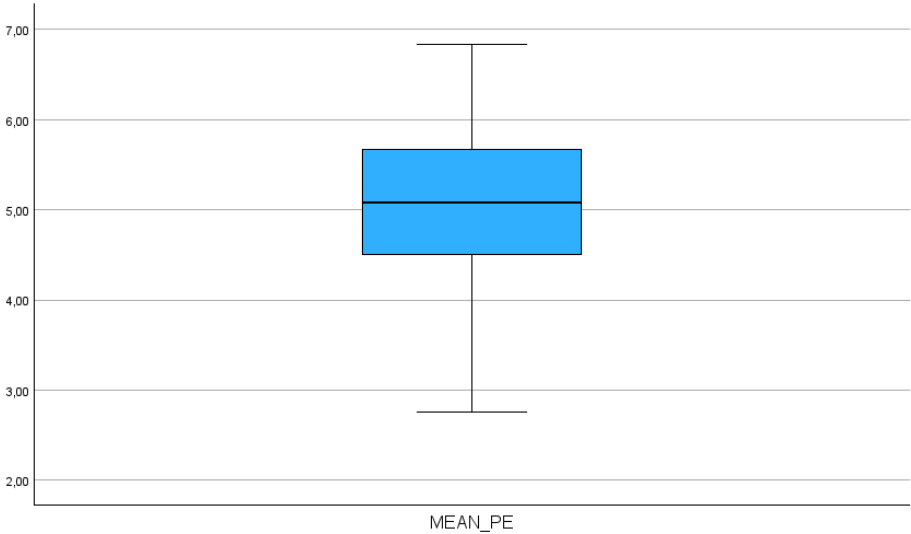
A1.1 Perceived Authentic Leadership Outliers



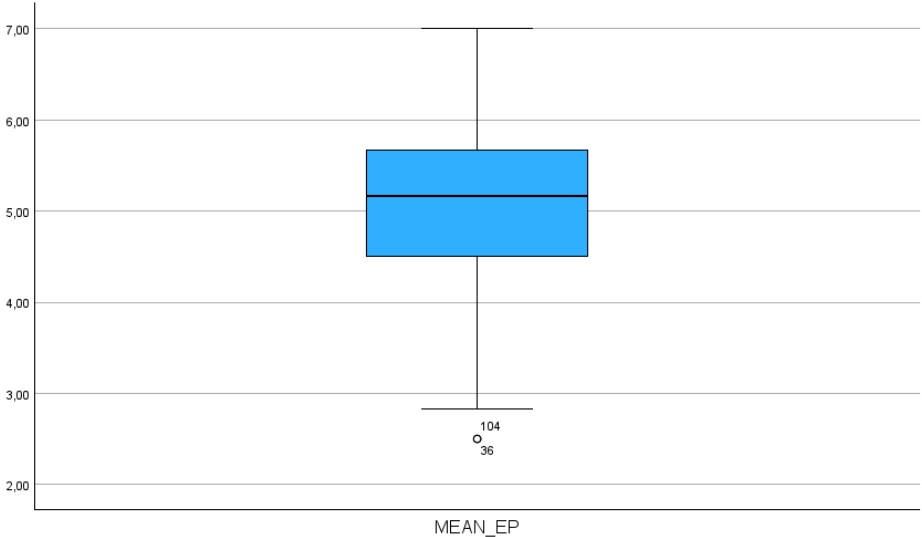
A1.2 Organizational Trust Outliers



A1.3 Psychological Empowerment Outliers



A1.4 Employee Performance Outliers



A1.5 Sample versus Population Comparison

A1.5.1 Gender (Population based on Q1 2024):

Gender:	Sample Total	Sample Percentage	Population Total (x 1 000)	Population Percentage
Male	59	53,6%	4 126	50,5%
Female	51	46,4%	4 039	49,5%
Total	110	100%	8 165	100%

A1.5.2 Education

Education	Sample Total	Sample Percentage	Education	Population Total	Population Percentage
Middelbare School	11	10%	Low	1 749	21,5%
MBO	24	21,8%	Medium	3 120	38,4%
HBO	46	41,8%	High	3 262	40,1%
WO	29	26,4%			
'High'	75	68,2%			
Total	110	100%		8 131 (34 unknown)	100%

A1.5.3 Age Groups

Age	Sample Total	Sample Percentage	Population Total (x1000)	Population Sample
15 – 34	75	68,2%	3 371	41,3%
35 – 54	23	20,9%	3 101	38,0%
55 - 75	12	10,9%	1 693	20,7%
Total	110	100%	8 165	100%

Appendix B: Measurement Instruments and Translation

B1. Measurement Instrument Employee Performance

Indicators (English):	Translation Dutch:
1. I often put extra effort in carrying out my job	1. Ik steek vaak extra moeite in het uitvoeren van mijn werk
2. The quality of my work is top-notch	2. De kwaliteit van mijn werk is uitstekend
3. I try to work as hard as possible	3. Ik probeer zo hard mogelijk te werken
4. I intentionally put a great deal of effort in carrying out my job	4. Ik steek bewust veel moeite in het uitvoeren van mijn werk
5. I deliver higher quality than what can be expected	5. Ik lever werk van een hogere kwaliteit dan wat verwacht wordt
6. I almost put in more effort than what can be characterized as an acceptable level of effort	6. Ik presteer bijna altijd beter dan wat beschouwd kan worden als acceptabele prestatie

B2. Measurement Instrument Perceived Authentic Leadership

Factor:	Self-Awareness	Dutch: Zelfbewustzijn	Relational Transparency	Dutch: Relationale Transparantie	Balanced Processing	Dutch: Gebalanceerde Aanpak	Internalized Moral Perspective	Dutch: Persoonlijke morele waarden
Item 1	1. My leader describes accurately the way that others view his/her abilities	Mijn leidinggevende kan de manier waarop anderen zijn/haar bekwaamheden zien accuraat beschrijven	1. My leader clearly states what he/she means	Mijn leidinggevende geeft duidelijk aan wat hij/zij bedoelt	1. My leader asks for ideas that challenge his/her core beliefs	Mijn leidinggevende vraagt naar ideeën die zijn/haar diepste overtuigingen uitdagen	1. My leader shows his/her consistency between his/her beliefs and actions	De acties van mijn leidinggevende zijn consistent met zijn/haar overtuigingen
Item 2	2. My leader shows that he/she understands his/her strengths and weaknesses	Mijn leidinggevende toont dat hij/zij de eigen sterkten en zwakheden begrijpt	2. My leader openly shares information with others	Mijn leidinggevende deelt openlijk informatie met anderen	2. My leader carefully listens to alternative perspectives before reaching a conclusion	Mijn leidinggevende luistert zorgvuldig naar verschillende perspectieven vooraleer een beslissing te nemen	2. My leader uses his/her core beliefs to make decisions	Mijn leidinggevende gebruikt zijn/haar diepste overtuigingen bij het nemen van beslissingen
Item 3	3. My leader is clearly aware of the impact he/she has on others	Mijn leidinggevende is zich duidelijk bewust van de impact die hij/zij heeft op anderen	3. My leader expresses his/her ideas and thoughts clearly to others	Mijn leidinggevende drukt zijn/haar ideeën en gedachten duidelijk uit aan anderen	3. My leader objectively analyzes relevant data before making a decision	Mijn leidinggevende analyseert objectief relevante data vooraleer een beslissing te nemen	3. My leader resists pressures on him/her to do things contrary to his/her beliefs	Mijn leidinggevende weerstaat aan de druk van anderen op hem/haar om dingen te doen die tegengesteld zijn aan zijn/haar overtuigingen
Item 4					4. My leader encourages others to voice opposing points of view	Mijn leidinggevende moedigt anderen aan om tegengestelde gezichtspunten te verwoorden	4. My leader is guided in his/her actions by internal moral standards	Mijn leidinggevende laat zich in zijn/haar acties leiden door zijn/haar persoonlijke morele standaarden

B3. Measurement Instrument Organizational Trust

Indicators (English):	Translation (Dutch):
1. There is a very high level of trust throughout this organization	1. Er is een zeer hoge mate van vertrouwen binnen deze organisatie
2. In this organization, subordinates have a great deal of trust for managers	2. In deze organisatie hebben werknemers een grote mate van vertrouwen in de leidinggevenden
3. If someone in this organization makes a promise, others within the organization will almost always trust that the person will do his or her best to keep the promise	3. Als iemand in deze organisatie een belofte doet, zullen anderen in deze organisatie er bijna altijd op vertrouwen dat deze persoon zijn best zal doen om zijn belofte na te komen
4. Managers in this company trust their subordinates to make good decisions	4. Leidinggevenden in deze organisatie vertrouwen erop dat hun werknemers juiste beslissingen nemen

B4. Measurement Instrument Psychological Empowerment

Factor:	Meaning	Dutch: Betekenis	Competence	Dutch: Competentie	Self-Determination	Dutch: Autonomie	Impact	Dutch: Invloed
Item 1	1. The work that I do is important to me	Het werk dat ik doe is erg belangrijk voor mij	1. I am confident about my ability to do my job	Ik heb vertrouwen in mijn bekwaamheden om mijn werk goed te doen	1. I have significant autonomy in determining how I do my job	Ik heb autonomie in het uitvoeren van mijn werk	1. My impact on what happens in my department is large	Ik heb een behoorlijke invloed op wat er gebeurt in mijn afdeling
Item 2	2. My job activities are personally meaningful to me	Mijn werkactiviteiten zijn voor mij van persoonlijke betekenis	2. I am self-assured about my capabilities to perform my work activities	Ik ben zelfverzekerd over mijn capaciteiten om mijn werktaken adequaat te volbrengen	2. I can decide on my own how to go about doing my own work	Ik kan zelf beslissen hoe ik mijn werkzaamheden uitvoer	2. I have a great deal of control over what happens in my department	Ik heb veel controle over wat er gebeurt in mijn afdeling
Item 3	3. The work I do is meaningful to me	Mijn werk betekent veel voor mij	3. I have mastered the skills necessary for my job	Ik beheers de vaardigheden die nodig zijn voor mijn werk	3. I have considerable opportunity for independence and freedom in how I do my job	Ik heb veel mogelijkheden om onafhankelijk en in vrijheid mijn werk uit te voeren	3. I have significant influence over what happens in my department	Mijn invloed op het reilen en zeilen in mijn afdeling is groot

B5. Summarizing Measurement Table

Variable:	Variable Name:	Levels:	Way of Measuring:	Reference:	Reliability:
Independent Variable:	Perceived Authentic Leadership	1-7 Likert-scale	Taking the arithmetic mean of the 14-item Authentic Leadership Inventory	Neider & Schriesheim (2011) Dutch version: Mortier (2017)	Neider & Schriesheim (2011) .74 to .85 Mortier (2017) .89 and .90
Mediator 1:	Organizational Trust	1-7 Likert-scale	4 Statements, taking the arithmetic mean to calculate Organizational Trust	Huff & Kelley (2003)	Huff & Kelley (2003) .79 Joo et al. (2022) .85
Mediator 2:	Psychological Empowerment	1-7 Likert-scale	12 Statements, taking the arithmetic mean to calculate Psychological Empowerment	Spreitzer (1995) Dutch version: Faber et al., (2006)	.80 – .90 (Spreitzer, 1999; Hancer et al., 2005) .86 (Faber et al., 2006)
Dependent Variable:	Employee Performance	1-7 Likert-scale	6 Statements, taking the arithmetic mean to calculate Employee Performance	Kuvaas (2006)	Kuvaas (2006) .74 Shahzad et al. (2018) .82

Appendix C: Survey Qualtrics

C1. Dutch Version (Utilized)

Beste Respondent,

Heel erg bedankt voor uw deelname aan dit onderzoek. Als onderdeel van de master Strategic Management aan de Radboud Universiteit, voer ik onderzoek uit naar de effecten van authentiek leiderschap op de prestaties van werknemers. De enquête bestaat uit vier korte onderdelen en zal in totaal ongeveer 5 tot 10 minuten duren.

Deelname is vrijwillig en anoniem, waarbij de verzamelde gegevens uitsluitend gebruikt worden voor dit onderzoek. Dit betekent dan ook dat de gegevens niet naar u te herleiden zullen zijn. Het is van belang dat u de vragen zo eerlijk mogelijk beantwoordt. Hierbij zijn er geen goede of foute antwoorden. Het is de bedoeling dat u deze enquête één keer invult en u kunt hierbij op elk moment stoppen.

Als u vragen of opmerkingen heeft over de enquête, neem dan gerust contact met mij op via svn.haalboom@ru.nl.

Met vriendelijke groeten,

Sven Haalboom

Geeft u geïnformeerde toestemming om deel te nemen aan het onderzoek? (Indien u geen toestemming geeft, wordt u naar het einde van de enquête geleid.)

- Ja
- Nee

*Skip To: End of Survey If Geeft u geïnformeerde toestemming om deel te nemen aan het onderzoek?
(Indien u geen toestemming... = Nee*

Voldoet u aan de volgende criteria voor deelname aan dit onderzoek?

- U bent tussen de 15 en 75 jaar oud
- U bent werkzaam in Nederland en/of voor een Nederlands bedrijf
- U bent werkzaam onder een leidinggevende

Indien u nee invult, wordt u naar het einde van de enquête geleid.

- Ja
- Nee

Skip To: End of Survey If Voldoet u aan de volgende criteria voor deelname aan dit onderzoek? - U bent tussen de 15 en 75 j... = Nee

In dit eerste onderdeel worden een aantal demografische vragen aan u voorgelegd. Als u bij één van deze vragen 'zeg ik liever niet' antwoordt, wordt u naar het einde van de enquête geleid.

Hoe identificeert u zichzelf?

- Man
 - Vrouw
 - Anders, namelijk... _____
 - Zeg ik liever niet
-

Wat is uw hoogst genoten opleiding?

- Middelbare school (VMBO, HAVO, VWO etc.)
- Middelbaar Beroeps Onderwijs (MBO)
- Hoger Beroeps Onderwijs (HBO)
- Wetenschappelijk Onderwijs (WO)
- Geen middelbare school
- Zeg ik liever niet

Skip To: End of Survey If Wat is uw hoogst genoten opleiding? = Zeg ik liever niet

Wat is uw leeftijd?

- 14 jaar of jonger
- 15 tot 34 jaar
- 35 tot 54 jaar
- 55 tot 75 jaar
- 76 jaar of ouder
- Zeg ik liever niet

Skip To: End of Survey If Wat is uw leeftijd? = Zeg ik liever niet

In deze enquête worden vragen aan u voorgelegd over het type leiderschap dat wordt vertoond door uw leidinggevende in het bedrijf waarvoor u werkt. Met leidinggevende wordt hierbij uw **meest directe** leidinggevende bedoeld. Als u meerdere banen heeft met een leidinggevende, kies dan één van deze banen en vul de enquête in op basis van deze baan.

Hoelang bent u werkzaam binnen dit bedrijf?

- 0 - 2 jaar
- 3 - 5 jaar
- 5 - 10 jaar
- 10 - 20 jaar
- 21 jaar of langer
- Zeg ik liever niet

Skip To: End of Survey If In deze enquête worden vragen aan u voorgelegd over het type leiderschap dat wordt vertoond door... = Zeg ik liever niet

In welke mate bent u tevreden met uw huidige baan?

U kunt de balk hieronder verschuiven naar de juiste mate.

1 = Zeer ontevreden 7 = Zeer tevreden

1 2 3 4 5 6 7





In dit tweede onderdeel van de enquête worden een aantal stellingen aan u voorgelegd over het type leiderschap dat wordt vertoond door uw leidinggevende in het bedrijf waarin u werkzaam bent. Met leidinggevende wordt hierbij dus uw **meest directe** leidinggevende bedoeld.

In welke mate bent u het eens met de volgende stellingen?

U kunt per stelling de balk verschuiven naar de juiste mate.

Als u een melding krijgt met 'Beantwoord deze vraag', betekent dit dat u een stelling bent vergeten te beantwoorden.

1 = Helemaal mee oneens 7 = Helemaal mee eens

Mijn leidinggevende kan de manier waarop anderen zijn/haar bekwaamheden zien accuraat beschrijven	
Mijn leidinggevende toont dat hij/zij de eigen sterkten en zwakheden begrijpt	
Mijn leidinggevende is zich duidelijk bewust van de impact die hij/zij heeft op anderen	
Mijn leidinggevende geeft duidelijk aan wat hij/zij bedoelt	
Mijn leidinggevende deelt openlijk informatie met anderen	
Mijn leidinggevende drukt zijn/haar ideeën en gedachten duidelijk uit aan anderen	
Mijn leidinggevende vraagt naar ideeën die zijn/haar diepste overtuigingen uitdagen	
Mijn leidinggevende luistert zorgvuldig naar verschillende perspectieven vooraleer een beslissing te nemen	
Mijn leidinggevende analyseert objectief relevante data vooraleer een beslissing te nemen	
Mijn leidinggevende moedigt anderen aan om tegengestelde gezichtspunten te verwoorden	
De acties van mijn leidinggevende zijn consistent met zijn/haar overtuigingen	
Mijn leidinggevende gebruikt zijn/haar diepste overtuigingen bij het nemen van beslissingen	
Mijn leidinggevende weerstaat aan de druk van anderen op hem/haar om dingen te doen die tegengesteld zijn aan zijn/haar overtuigingen	
Mijn leidinggevende laat zich in zijn/haar acties leiden door zijn/haar persoonlijke morele standaarden	
Mijn leidinggevende is vaag over wat hij/zij bedoelt	



In dit derde onderdeel van deze enquête worden een aantal stellingen gepresenteerd, kijkend naar hoe u uw werkomgeving ervaart.

In welke mate bent u het eens met de volgende stellingen over de organisatie waarin u werkzaam bent?

Als u een melding krijgt met 'Beantwoord deze vraag', betekent dit dat u een stelling bent vergeten te beantwoorden.

	1 = Helemaal mee oneens	2	3	4	5	6	7 = Helemaal mee eens
Er is een zeer hoge mate van vertrouwen binnen deze organisatie							
In deze organisatie hebben werknemers een grote mate van vertrouwen in de leidinggevenden							
Als iemand in deze organisatie een belofte doet, zullen anderen in deze organisatie er bijna altijd op vertrouwen dat deze persoon zijn best zal doen om zijn belofte na te komen							
Leidinggevenden in deze organisatie vertrouwen erop dat hun werknemers juiste beslissingen nemen							
Er is een zeer lage mate van vertrouwen binnen deze organisatie							



In welke mate bent u het eens met de volgende stellingen, kijkend naar uw huidige baan?

Als u een melding krijgt met 'Beantwoord deze vraag', betekent dit dat u een stelling bent vergeten te beantwoorden.

	1 = Helemaal mee oneens			7 = Helemaal mee eens			
	1	2	3	4	5	6	7
Het werk dat ik doe is erg belangrijk voor mij							
Mijn werkactiviteiten zijn voor mij van persoonlijke betekenis							
Mijn werk betekent veel voor mij							
Ik heb vertrouwen in mijn bekwaamheden om mijn werk goed te doen							
Ik ben zelfverzekerd over mijn capaciteiten om mijn werktaken adequaat te volbrengen							
Ik beheers de vaardigheden die nodig zijn voor mijn werk							
Ik heb autonomie in het uitvoeren van mijn werk							
Ik kan zelf beslissen hoe ik mijn werkzaamheden uitvoer							
Ik heb veel mogelijkheden om onafhankelijk en in vrijheid mijn werk uit te voeren							
Ik heb een behoorlijke invloed op wat er gebeurt in mijn afdeling							
Ik heb veel controle over wat er gebeurt in mijn afdeling							
Mijn invloed op het reilen en zeilen in mijn afdeling is groot							
Mijn werk betekent weinig voor mij							



In dit laatste onderdeel van de enquête worden nog een laatste paar stellingen aan u getoond.

In welke mate bent u het eens met de volgende stellingen, kijkend naar uw huidige baan?

Als u een melding krijgt met 'Beantwoord deze vraag', betekent dit dat u een stelling bent vergeten te beantwoorden.

	1 = Helemaal mee oneens			7 = Helemaal mee eens			
	1	2	3	4	5	6	7
Ik steek vaak extra moeite in het uitvoeren van mijn werk							
De kwaliteit van mijn werk is uitstekend							
Ik probeer zo hard mogelijk te werken							
Ik steek bewust veel moeite in het uitvoeren van mijn werk							
Ik lever werk van een hogere kwaliteit dan wat verwacht wordt							
Ik presteer bijna altijd beter dan wat beschouwd kan worden als acceptabele prestatie							
De kwaliteit van mijn werk is slecht							

Hartelijk dank voor het invullen van deze enquête. Hiermee heeft u een belangrijke bijdrage geleverd aan het kunnen uitvoeren van mijn afstudeeronderzoek.

Uw antwoorden zijn opgeslagen.

C2. Translation of the Survey to English

Dear Respondent,

Thank you very much for participating in this study. As part of my master Strategic Management at Radboud University, I am conducting research on the effects of Authentic Leadership on Employee Performance. The survey consists of four short sections and will take approximately 5-10 minutes to complete.

Participation is voluntary and anonymous, with the data collected used solely for this research. This means that the data will not be traceable back to you. It is important that you answer the questions as honestly as possible. There are no right or wrong answers. This survey is meant to be completed only once and you can stop at any time.

If you have any questions or comments about the survey, please feel free to contact me at sven.haalboom@ru.nl

Kind regards,

Sven Haalboom

Do you give informed consent to participate in this research? (If you do not consent, you will be directed to the end of the survey.)

Yes

No

*Skip To: End of Survey If Geeft u geïnformeerde toestemming om deel te nemen aan het onderzoek?
(Indien u geen toestemming... = Nee*

Do you meet the following criteria for participating in this study?

- You are between 15 and 75 years old
- You are working in the Netherlands and/or for a Dutch company
- You are working under a supervisor

If you enter no, you will be directed to the end of the survey.

Yes

No

Skip To: End of Survey If Voldoet u aan de volgende criteria voor deelname aan dit onderzoek? - U bent tussen de 15 en 75 j... = Nee

In this first section, you will be presented with a number of demographic questions. If you answer 'prefer not to say' to any of these questions, you will be directed to the end of the survey.

How do you identify yourself?

Male

Female

Other, namely... _____

Prefer not to say

What is the highest level of education you completed? (Options in Dutch, as they are difficult to translate).

- Middelbare school (VMBO, HAVO, VWO etc.)
- Middelbaar Beroeps Onderwijs (MBO)
- Hoger Beroeps Onderwijs (HBO)
- Wetenschappelijk Onderwijs (WO)
- Geen middelbare school
- Prefer not to say

Skip To: End of Survey If Wat is uw hoogst genoten opleiding? = Zeg ik liever niet

What is your age?

- 14 years old or younger
- 15 to 34 years old
- 35 to 54 years old
- 55 to 75 years old
- 76 years old or older
- Prefer not to say

Skip To: End of Survey If Wat is uw leeftijd? = Zeg ik liever niet

In this survey, you will be asked questions about the type of leadership exhibited by your supervisor you in the company for which you work. By supervisor, we mean your **most direct** supervisor. If you have multiple jobs with a supervisor, please choose one of these jobs and complete the survey based on that job.

How long have you been employed at this company?

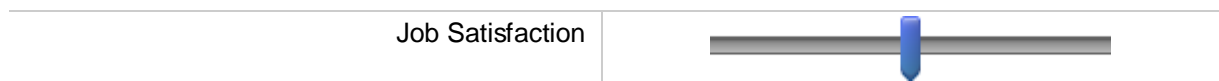
- 0 - 2 years
- 3 -5 years
- 5 - 10 years
- 10 - 20 years
- 21 jaar of longer
- Prefer not to say

Skip To: End of Survey If In deze enquête worden vragen aan u voorgelegd over het type leiderschap dat wordt vertoond door... = Zeg ik liever niet

To what extent are you satisfied with your job?

1 = Very dissatisfied 7 = Very Satisfied

1 2 3 4 5 6 7





In this second part of the survey, several statements will be shown about the type of leadership exhibited by the leader in the company you are working for. **'Leader' refers to your most direct supervisor.** To what extent do you agree with the following statements?

You can move the bar for each statement to the appropriate degree.

If you receive a notification saying 'Beantwoord deze vraag', it means you forgot to answer a statement.

	1 = Completely Disagree	7 = Completely Agree
My leader clearly states what he/she means		
My leader shows consistency between his/her beliefs and actions		
My leader asks for ideas that challenge his/her core beliefs		
My leader describes accurately the way that others view his/her abilities		
My leader uses his/her core beliefs to make decisions		
My leader carefully listens to alternative perspectives before reaching a conclusion		
My leader shows that he/she understands his/her strengths and weaknesses		
My leader openly shares information with others		
My leader resists pressures on him/her to do things contrary to his/her beliefs		
My leader objectively analyzes relevant data before making a decision		
My leader is clearly aware of the impact he/she has on others		
My leader expresses his/her ideas and thoughts clearly to others		
My leader is guided in his/her actions by internal moral standards		
My leader encourages others to voice opposing points of view		
My leader is vague about what he/she means		



In this third part of the survey, several statements are presented looking at how you experience the work environment of your job.

To what extent do you agree with the following statements, looking at the organizational you are working for?

If you receive a notification saying 'Beantwoord deze vraag, it means you forgot to answer a statement.

	1 = Completely Disagree			7 = Completely Agree			
	1	2	3	4	5	6	7
There is a very high level of trust throughout this organization							
In this organization, subordinates have a great deal of trust for managers							
If someone in this organization makes a promise, others within the organization will almost always trust that the person will do his or her best to keep the promise							
Managers in this company trust their subordinates to make good decisions							
There is a very low level of trust within this organizational							



To what extent do you agree with the following statements, looking at your current job?

If you receive a notification saying 'Beantwoord deze vraag', it means you forgot to answer a statement.

	1 = Completely Disagree			7 = Completely Agree				
	1	2	3	4	5	6	7	
I am confident about my ability to do my job								
The work that I do is important to me								
I have significant autonomy in determining how I do my job								
My impact on what happens in my department is large								
My job activities are personally meaningful to me								
I have a great deal of control over what happens in my department								
I can decide on my own how to go about doing my own work								
I have considerable opportunity for independence and freedom in how I do my job								
I have mastered the skills necessary for my job								
The work I do is meaningful to me								
I have significant influence over what happens in my department								
I am self-assured about my capabilities to perform my work activities								
My work means little to me								



In this final part of the survey, you will encounter a final set of statements.

To what extent do you agree with the following statements, looking at your current job?

If you receive a notification saying 'Beantwoord deze vraag', it means you forgot to answer a statement.

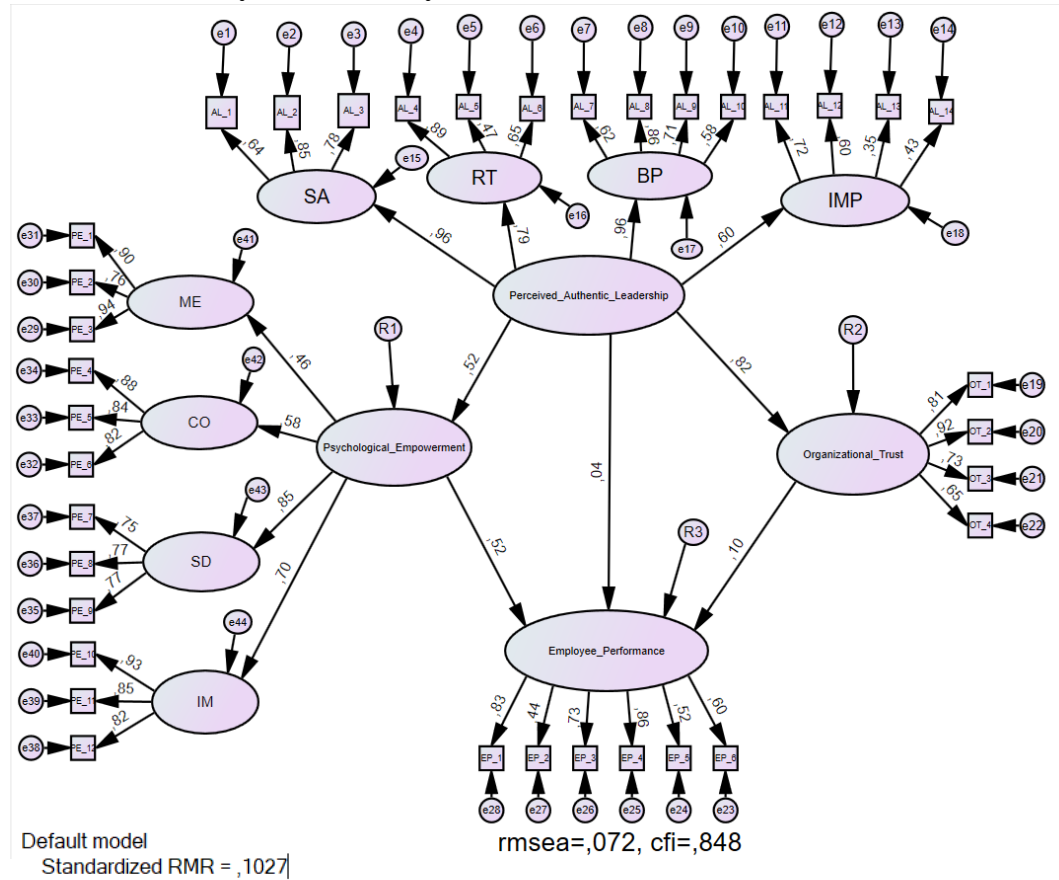
	1 = Completely disagree				7 = Completely Agree		
	1	2	3	4	5	6	7
I often put extra effort in carrying out my job							
The quality of my work is top-notch							
I try to work as hard as possible							
I intentionally put a great deal of effort in carrying out my job							
I deliver higher quality than what can be expected							
I almost put in more effort than what can be characterized as an acceptable level of effort							
The quality of my work is poor							

Thank you very much for completing this survey. In doing so, you have made an important contribution to the execution of my graduation research.

Your answers have been saved.

Appendix D: Preparation of the Main Analysis

D1. Confirmatory Factor Analysis in AMOS



D2. Construct Reliability of Variables

D2.1 Perceived Authentic Leadership

Reliability Statistics	
Cronbach's Alpha	N of Items
,874	14

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AL_1: Self-Awareness (1)	59,5273	153,426	,597	,864
AL_2: Self-Awareness (2)	59,4273	144,302	,695	,857
AL_3: Self-Awareness (3)	59,4273	145,513	,675	,858
AL_4: Relational Transparency (1)	59,1000	148,605	,684	,859
AL_5: Relational Transparency (2)	59,4364	150,542	,482	,869
AL_6: Relational Transparency (3)	59,2364	153,338	,509	,867
AL_7: Balanced Processing (1)	60,0818	148,957	,592	,863
AL_8: Balanced Processing (2)	59,4636	145,187	,726	,856
AL_9: Balanced Processing (3)	59,4000	151,949	,585	,864
AL_10: Balanced Processing (4)	59,6818	150,604	,538	,866
AL_11: Internalized Moral Perspective (1)	59,1364	154,211	,510	,867
AL_12: Internalized Moral Perspective (2)	59,3909	162,864	,294	,877
AL_13: Internalized Moral Perspective (3)	59,6273	155,630	,431	,871
AL_14: Internalized Moral Perspective (4)	59,4182	163,548	,223	,881

D2.2 Organizational Trust

Reliability Statistics	
Cronbach's Alpha	N of Items
,858	4

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
OT_1	14,7182	12,571	,744	,802
OT_2	14,9727	12,522	,818	,769
OT_3	14,6818	13,705	,669	,833
OT_4	14,1273	15,452	,592	,862

D2.3 Psychological Empowerment

Reliability Statistics	
Cronbach's Alpha	N of Items
,862	12

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PE_1: Meaning (1)	55,5455	103,223	,445	,858
PE_2: Meaning (2)	55,8182	104,811	,431	,859
PE_3: Meaning (3)	55,5182	103,059	,467	,857
PE_4: Competence (1)	54,2273	107,040	,574	,852
PE_5: Competence (2)	54,4182	108,190	,484	,856
PE_6: Competence (3)	54,3545	109,350	,441	,858
PE_7: Self-Determination (1)	54,9364	99,014	,634	,845
PE_8: Self-Determination (2)	54,9182	98,700	,583	,849
PE_9: Self-Determination (3)	54,8636	100,412	,608	,847
PE_10: Impact (1)	55,5909	96,758	,616	,846
PE_11: Impact (2)	55,6091	97,708	,626	,845
PE_12: Impact (3)	55,6000	97,857	,638	,844

D2.4 Employee Performance

Reliability Statistics	
Cronbach's Alpha	N of Items
,826	6

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EP_1	25,3182	19,907	,741	,766
EP_2	25,1091	23,346	,405	,836
EP_3	25,2545	20,375	,599	,798
EP_4	25,0273	19,825	,737	,766
EP_5	25,2273	22,985	,506	,815
EP_6	25,2000	22,180	,599	,798

D3. Construct Reliability Subdimensions

D3.1 Perceived Authentic Leadership: Self-Awareness

Reliability Statistics	
Cronbach's Alpha	N of Items
,798	3

D3.2 Perceived Authentic Leadership: Relational Transparency

Reliability Statistics	
Cronbach's Alpha	N of Items
,682	3

D3.3 Perceived Authentic Leadership: Balanced Processing

Reliability Statistics	
Cronbach's Alpha	N of Items
,788	4

D3.4 Perceived Authentic Leadership: Internalized Moral Perspective

Reliability Statistics	
Cronbach's Alpha	N of Items
,573	4

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AL_11: Internalized Moral Perspective (1)	13,6455	9,314	,417	,451
AL_12: Internalized Moral Perspective (2)	13,9000	8,972	,545	,357
AL_13: Internalized Moral Perspective (3)	14,1364	11,165	,149	,664
AL_14: Internalized Moral Perspective (4)	13,9273	9,352	,362	,496

Perceived Authentic Leadership: Internalized Moral Perspective (After Removing I3)

Reliability Statistics	
Cronbach's Alpha	N of Items
,664	3

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AL_11: Internalized Moral Perspective (1)	9,2455	6,370	,369	,705
AL_12: Internalized Moral Perspective (2)	9,5000	5,482	,627	,377
AL_14: Internalized Moral Perspective (4)	9,5273	5,536	,454	,601

D3.5 Psychological Empowerment: Meaning

Reliability Statistics	
Cronbach's Alpha	N of Items
,900	3

D3.6 Psychological Empowerment: Competence

Reliability Statistics	
Cronbach's Alpha	N of Items
,884	3

C3.7 Psychological Empowerment: Self-Determination

Reliability Statistics	
Cronbach's Alpha	N of Items
,807	3

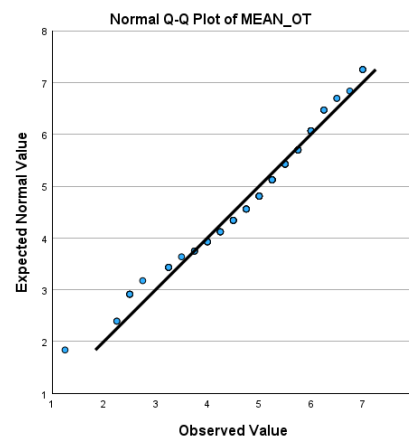
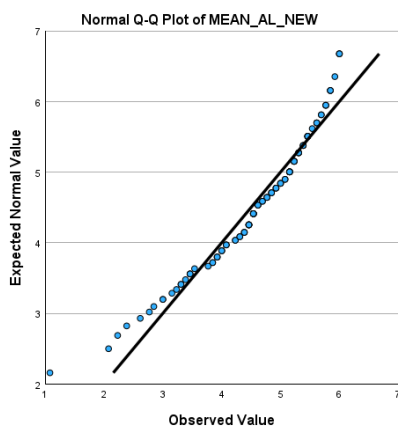
C3.8 Psychological Empowerment: Impact

Reliability Statistics	
Cronbach's Alpha	N of Items
,896	3

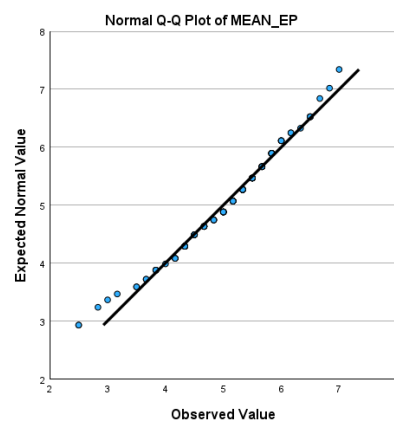
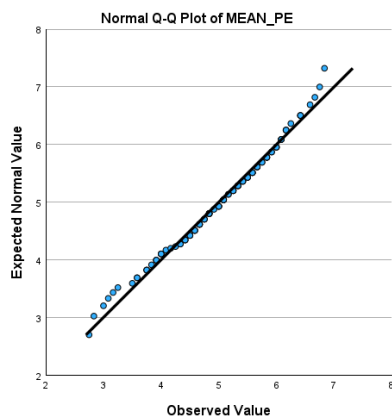
D4. Assumptions

D4.1 Normality

D4.1.1 Perceived Authentic Leadership and Organizational Trust (QQ-Plots)

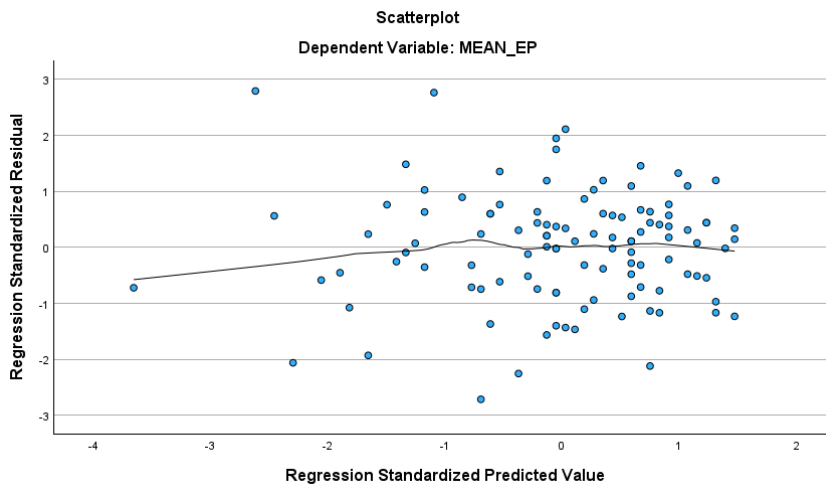


D4.1.2 Psychological Empowerment and Employee Performance (QQ-plots)

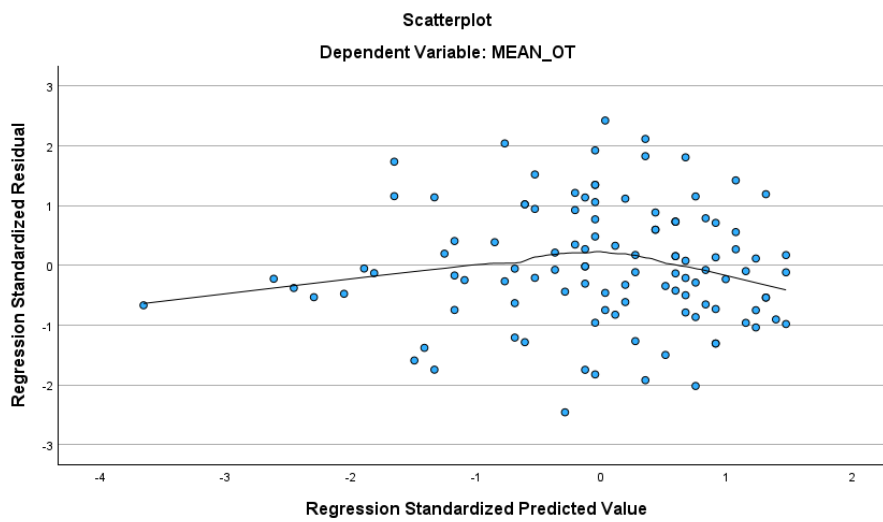


D4.2 Linearity

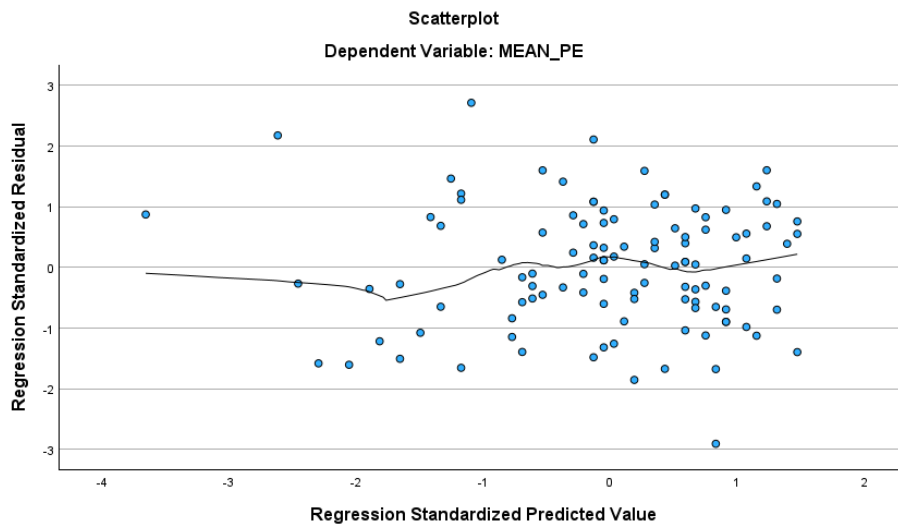
D4.2.1 Perceived Authentic Leadership on Employee Performance (X on Y)



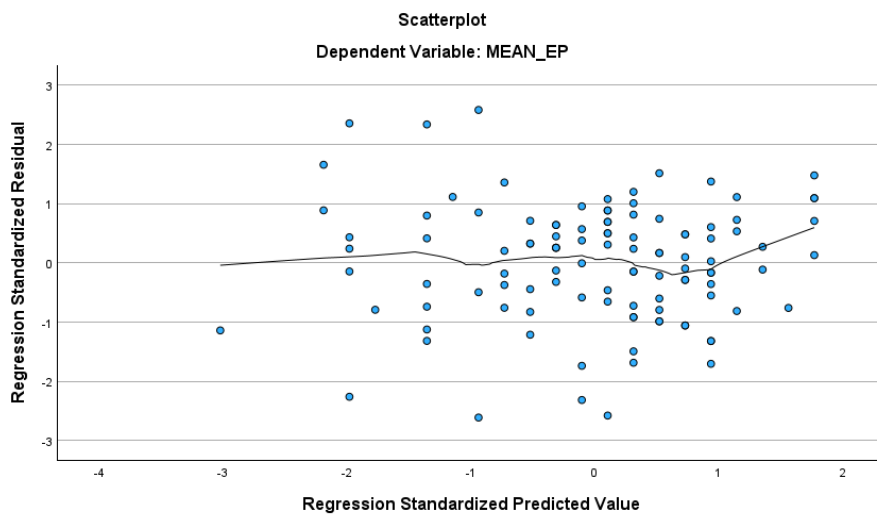
D4.2.2 Perceived Authentic Leadership on Organizational Trust (X on M1)



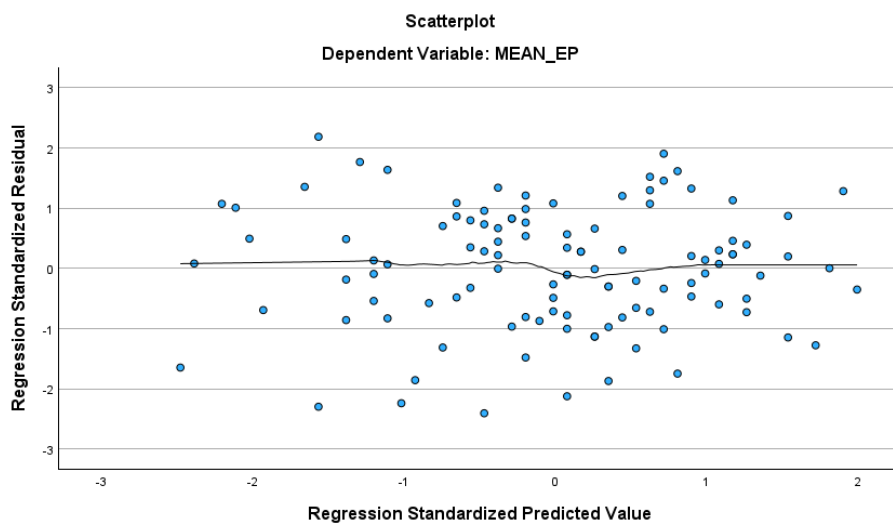
D4.2.3 Perceived Authentic Leadership on Psychological Empowerment (X on M2)



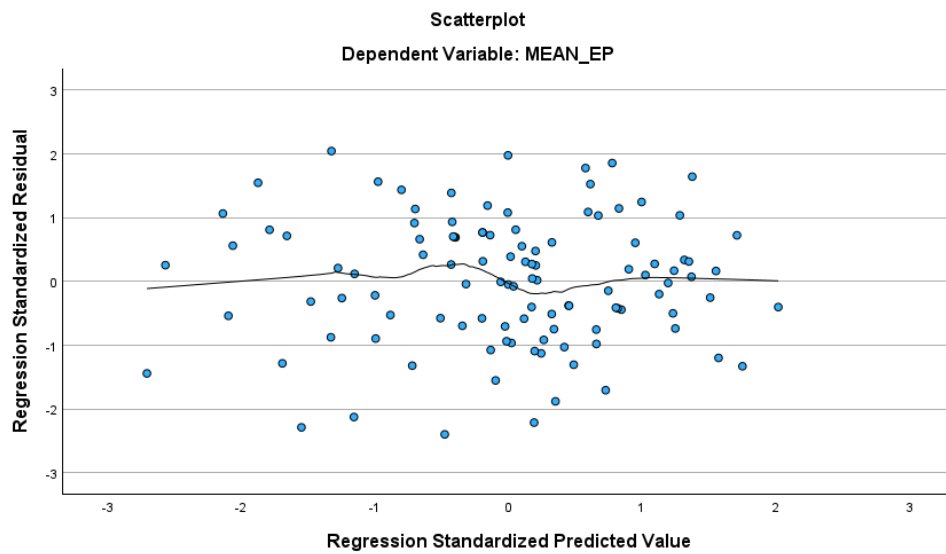
D4.2.4 Organizational Trust on Employee Performance (M1 on Y)



D4.2.5 Psychological Empowerment on Employee Performance (M2 on Y)



D4.2.6 All Together (Also for Homoscedasticity)



D4.3 Causal Influence of Mediating Variables (Pearson's Test)

Correlations			
		MEAN_OT	MEAN_PE
MEAN_OT	Pearson Correlation	1	,384**
	Sig. (2-tailed)		<,001
	N	110	110
MEAN_PE	Pearson Correlation	,384**	1
	Sig. (2-tailed)	<,001	
	N	110	110

** . Correlation is significant at the 0.01 level (2-tailed).

Appendix E: Parallel Mediation Analysis

E1. Main Model

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 4
Y : MEAN_EP
X : MEAN_AL_
M1 : MEAN_OT
M2 : MEAN_PE

Covariates:
Gender Educatio Age Tenure Job_Sat

Sample
Size: 110

OUTCOME VARIABLE:
MEAN_OT

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,7220	,5213	,7289	18,6954	6,0000	103,0000	,0000

Model							
	coeff	se	t	p	LLCI	ULCI	
constant	,6686	,7047	,9487	,3450	-,7291	2,0663	
MEAN_AL_	,7949	,1038	7,6587	,0000	,5890	1,0007	
Gender	,1995	,1732	1,1519	,2520	-,1440	,5431	
Educatio	,0015	,0943	,0156	,9876	-,1856	,1885	
Age	-,0833	,1469	-,5666	,5722	-,3747	,2082	
Tenure	-,1200	,0826	-1,4528	,1493	-,2838	,0438	
Job_Sat	,1400	,0868	1,6135	,1097	-,0321	,3120	

OUTCOME VARIABLE:
MEAN_PE

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,5410	,2927	,6243	7,1027	6,0000	103,0000	,0000

Model							
	coeff	se	t	p	LLCI	ULCI	
constant	2,6956	,6522	4,1331	,0001	1,4021	3,9891	
MEAN_AL_	,3105	,0960	3,2324	,0016	,1200	,5010	
Gender	-,0136	,1603	-,0847	,9327	-,3315	,3044	
Educatio	-,1212	,0873	-1,3884	,1680	-,2942	,0519	
Age	-,1349	,1360	-,9922	,3234	-,4046	,1348	
Tenure	,0689	,0764	,9012	,3696	-,0827	,2205	
Job_Sat	,2371	,0803	2,9532	,0039	,0779	,3963	

OUTCOME VARIABLE:
MEAN_EP

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,6443	,4152	,5229	8,9630	8,0000	101,0000	,0000

Model							
	coeff	se	t	p	LLCI	ULCI	
constant	1,4244	,6457	2,2059	,0297	,1435	2,7054	
MEAN_AL_	,0223	,1126	,1978	,8436	-,2011	,2457	
MEAN_OT	,0797	,0836	,9529	,3429	-,0862	,2457	

MEAN_PE	,4975	,0904	5,5037	,0000	,3182	,6768
Gender	-,1589	,1477	-1,0757	,2846	-,4518	,1341
Educatio	,0328	,0806	,4062	,6854	-,1272	,1927
Age	,2791	,1252	2,2292	,0280	,0307	,5274
Tenure	,0558	,0710	,7854	,4341	-,0851	,1966
Job_Sat	,0394	,0772	,5108	,6106	-,1137	,1926

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

MEAN_EP

Model Summary

R	R-sq	MSE	F	df1	df2	p
,4792	,2296	,6755	5,1159	6,0000	103,0000	,0001

Model

	coeff	se	t	p	LLCI	ULCI
constant	2,8187	,6784	4,1547	,0001	1,4732	4,1643
MEAN_AL_	,2401	,0999	2,4030	,0181	,0419	,4382
Gender	-,1497	,1668	-,8977	,3714	-,4805	,1810
Educatio	-,0274	,0908	-,3019	,7633	-,2075	,1526
Age	,2053	,1414	1,4516	,1496	-,0752	,4859
Tenure	,0805	,0795	1,0121	,3139	-,0772	,2382
Job_Sat	,1686	,0835	2,0182	,0462	,0029	,3342

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI
,2401	,0999	2,4030	,0181	,0419	,4382

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
,0223	,1126	,1978	,8436	-,2011	,2457

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,2178	,0996	,0330	,4224
MEAN_OT	,0634	,0679	-,0702	,1992
MEAN_PE	,1544	,0655	,0373	,2964

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

10000

WARNING: Variables names longer than eight characters can produce incorrect output when some variables in the data file have the same first eight characters. Shorter variable names are recommended. By using this output, you are accepting all risk and consequences of interpreting or reporting results that may be incorrect.

----- END MATRIX -----

E2. Robustness Check

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 4
 Y : MEAN_EP
 X : MEAN_AL_
 M1 : MEAN_OT
 M2 : MEAN_PE

Covariates:
 Gender Job_Sat Tenure Educatio

Sample
 Size: 35

OUTCOME VARIABLE:
 MEAN_OT

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,8177	,6687	,7976	11,7058	5,0000	29,0000	,0000

Model							
	coeff	se	t	p	LLCI	ULCI	
constant	-,0918	1,3634	-,0673	,9468	-2,8804	2,6967	
MEAN_AL_	,9761	,1656	5,8958	,0000	,6375	1,3148	
Gender	,4210	,3218	1,3082	,2011	-,2372	1,0791	
Job_Sat	,0608	,1645	,3693	,7146	-,2757	,3972	
Tenure	-,2257	,1233	-1,8309	,0774	-,4778	,0264	
Educatio	,0867	,2192	,3956	,6953	-,3616	,5351	

OUTCOME VARIABLE:
 MEAN_PE

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,6922	,4791	,6127	5,3351	5,0000	29,0000	,0013

Model							
	coeff	se	t	p	LLCI	ULCI	
constant	2,4344	1,1950	2,0371	,0509	-,0098	4,8786	
MEAN_AL_	,4205	,1451	2,8979	,0071	,1237	,7174	
Gender	-,0044	,2820	-,0155	,9878	-,5812	,5725	
Job_Sat	,2302	,1442	1,5965	,1212	-,0647	,5251	
Tenure	-,0698	,1081	-,6463	,5231	-,2908	,1512	
Educatio	-,1194	,1921	-,6217	,5390	-,5124	,2735	

OUTCOME VARIABLE:
 MEAN_EP

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,7244	,5247	,5298	4,2586	7,0000	27,0000	,0028

Model							
	coeff	se	t	p	LLCI	ULCI	
constant	2,4603	1,1899	2,0677	,0484	,0188	4,9018	
MEAN_AL_	,0447	,2075	,2155	,8310	-,3811	,4705	
MEAN_OT	,1124	,1525	,7370	,4675	-,2005	,4252	
MEAN_PE	,5961	,1740	3,4266	,0020	,2391	,9531	
Gender	-,1826	,2700	-,6761	,5047	-,7366	,3715	
Job_Sat	-,1074	,1399	-,7675	,4494	-,3944	,1797	

Tenure	-,0001	,1064	-,0005	,9996	-,2184	,2183
Educatio	,0062	,1805	,0345	,9727	-,3642	,3767

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

MEAN_EP

Model Summary

R	R-sq	MSE	F	df1	df2	p
,5425	,2943	,7325	2,4183	5,0000	29,0000	,0598

Model

	coeff	se	t	p	LLCI	ULCI
constant	3,9011	1,3066	2,9858	,0057	1,2288	6,5735
MEAN_AL_	,4051	,1587	2,5532	,0162	,0806	,7296
Gender	-,1379	,3084	-,4471	,6581	-,7686	,4928
Job_Sat	,0367	,1576	,2326	,8177	-,2858	,3591
Tenure	-,0670	,1181	-,5675	,5747	-,3087	,1746
Educatio	-,0552	,2101	-,2629	,7945	-,4849	,3744

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI
,4051	,1587	2,5532	,0162	,0806	,7296

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
,0447	,2075	,2155	,8310	-,3811	,4705

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	,3604	,2109	-,0388	,8063
MEAN_OT	,1097	,1601	-,2310	,4116
MEAN_PE	,2507	,1526	,0023	,5883

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

10000

WARNING: Variables names longer than eight characters can produce incorrect output when some variables in the data file have the same first eight characters. Shorter variable names are recommended. By using this output, you are accepting all risk and consequences of interpreting or reporting results that may be incorrect.

----- END MATRIX -----

Appendix F: Syntax of the Analysis

* S1: Transferring 150 respondents to SPSS

* S2: Data cleaning preparations. Consisting of:

- Removing unnecessary variables
- Changing variable names and labels. Adding the dimensions of the variables to the labels. For example: AL_1: Self-Awareness (1)
- Adding the right measures to the variables (Nominal vs Ordinal vs Scale)

* S3: Removing respondents who:

- Did not finish the survey. Select Finished -> Ascending -> Deleting False Cases: 36.
- Did not meet the criteria. Removing the 3 'no' cases.
- Did not look at control statements. One respondent filled in seven for all the statements in the first two lists of statements, including the control statements. This respondent is removed (R_21b4VOIrmYaU3AA). Gives a total of n = 110.

* S4: Calculating the mean for the subdimension of Perceived Authentic Leadership and Psychological Empowerment

```
COMPUTE AL_1_SA=MEAN(AL_1,AL_2,AL_3).
```

```
EXECUTE.
```

```
COMPUTE AL_2_RT=MEAN(AL_4,AL_5,AL_6).
```

```
EXECUTE.
```

```
COMPUTE AL_3_BP=MEAN(AL_7,AL_8,AL_9,AL_10).
```

```
EXECUTE.
```

```
COMPUTE AL_4_IMP=MEAN(AL_11,AL_12,AL_13,AL_14).
```

```
EXECUTE.
```

```
COMPUTE PE_1_ME=MEAN(PE_1,PE_2,PE_3).
```

```
EXECUTE.
```

```
COMPUTE PE_2_CO=MEAN(PE_4,PE_5,PE_6).
```

```
EXECUTE.
```

```
COMPUTE PE_3_SD=MEAN(PE_7,PE_8,PE_9).
```

```
EXECUTE.
```

```
COMPUTE PE_4_IM=MEAN(PE_10,PE_11,PE_12).
```

```
EXECUTE.
```

*** S5: Calculating the means of the main variables**

```
COMPUTE  
MEAN_AL=MEAN(AL_1,AL_2,AL_3,AL_4,AL_5,AL_6,AL_7,AL_8,AL_9,AL_10,AL_11,AL_12,AL_13,AL_14).  
EXECUTE.  
COMPUTE MEAN_OT=MEAN(OT_1,OT_2,OT_3,OT_4).  
EXECUTE.  
COMPUTE MEAN_PE=MEAN(PE_1,PE_2,PE_3,PE_4,PE_5,PE_6,PE_7,PE_8,PE_9,PE_10,PE_11,PE_12).  
EXECUTE.  
COMPUTE MEAN_EP=MEAN(EP_1,EP_2,EP_3,EP_4,EP_5,EP_6).  
EXECUTE.
```

*** S6: Outliers**

```
EXAMINE VARIABLES=MEAN_AL MEAN_OT MEAN_PE MEAN_EP  
/PLOT BOXPLOT STEMLEAF  
/COMPARE GROUPS  
/STATISTICS NONE  
/CINTERVAL 95  
/MISSING LISTWISE  
/NOTOTAL.
```

Natural Variation: there should be no measurement errors or unusual conditions. In total 5 (4 different cases) are seen as outliers, but they represent natural variation).

***S7: Confirmatory Factor Analysis in AMOS**

First, the latent variables with their indicators and the error terms (the 'e's) are incorporated. Subsequently, all labels and paths in the model were correctly specified. For all the outcome variables in the model, the error terms were added. To see the goodness of fit measures, the following title was inserted: $rmsea=\backslash rmsea$, $cfi=\backslash cfi$. After that, the model was estimated.

*** S8: Cronbach's Alphas (Construct Reliability)**

*** Perceived Authentic Leadership**

RELIABILITY

/VARIABLES=AL_1 AL_2 AL_3 AL_4 AL_5 AL_6 AL_7 AL_8 AL_9 AL_10 AL_11 AL_12 AL_13 AL_14

/SCALE('Perceived Authentic Leadership') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

*** Organizational Trust**

RELIABILITY

/VARIABLES=OT_1 OT_2 OT_3 OT_4

/SCALE('Organizational Trust') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

*** Psychological Empowerment**

RELIABILITY

/VARIABLES=PE_1 PE_2 PE_3 PE_4 PE_5 PE_6 PE_7 PE_8 PE_9 PE_10 PE_11 PE_12

/SCALE('Psychological Empowerment') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

*** Employee Performance**

RELIABILITY

/VARIABLES=EP_1 EP_2 EP_3 EP_4 EP_5 EP_6

/SCALE('Employee Performance') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

*** Reliability check of subdimensions Perceived Authentic Leadership and Psychological Empowerment**

*** All dimensions of Perceived Authentic Leadership**

Dimension 1: Self-Awareness

RELIABILITY

/VARIABLES=AL_1 AL_2 AL_3

/SCALE('Self-Awareness') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

Dimension 2: Relational Transparency

RELIABILITY

/VARIABLES=AL_4 AL_5 AL_6

/SCALE('Relational Transparency') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

Dimension 3: Balanced Processing

RELIABILITY

/VARIABLES=AL_7 AL_8 AL_9 AL_10

/SCALE('Balanced Processing') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

Dimension 4: Internalized Moral Perspective

RELIABILITY

/VARIABLES=AL_11 AL_12 AL_13 AL_14

/SCALE('Internalized Moral Perspective') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

Remove IMP 3 as a factor, based on Cronbach's Alpha and Total Item Correlation

RELIABILITY

/VARIABLES=AL_11 AL_12 AL_14

/SCALE('Internalized Moral Perspective After Deleting Item 3') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

* All dimensions of Psychological Empowerment

Dimension 1: Meaning

RELIABILITY

/VARIABLES=PE_1 PE_2 PE_3

/SCALE('Meaning') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

Dimension 2: Competence

RELIABILITY

/VARIABLES=PE_4 PE_5 PE_6

/SCALE('Competence') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

Dimension 3: Self-Determination

RELIABILITY

/VARIABLES=PE_7 PE_8 PE_9

/SCALE('Self-Determination') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

Dimension 4: Impact

RELIABILITY

/VARIABLES=PE_10 PE_11 PE_12

/SCALE('Impact') ALL

/MODEL=ALPHA

/SUMMARY=TOTAL.

*Calculating new total mean without IMP 3.

COMPUTE

MEAN_AL_NEW=MEAN(AL_1,AL_2,AL_3,AL_4,AL_5,AL_6,AL_7,AL_8,AL_9,AL_10,AL_11,AL_12,AL_14).

EXECUTE.

*** S9: Checking Sample Structure**

FREQUENCIES VARIABLES=Gender Education Age Tenure

/ORDER=ANALYSIS.

*** S10: Assumptions Check**

1: Normality

PLOT

/VARIABLES=MEAN_AL_NEW MEAN_OT MEAN_PE MEAN_EP

/NOLOG

/NOSTANDARDIZE

/TYPE=Q-Q

/FRACTION=BLOM

/TIES=MEAN

/DIST=NORMAL.

2: Linearity. Adding Loess Line 'Elements -> Fit Line'

* Perceived Authentic Leadership on Employee Performance (X on Y)

REGRESSION

```
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)  
/NOORIGIN  
/DEPENDENT MEAN_EP  
/METHOD=ENTER MEAN_AL_NEW  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/SAVE ZRESID.
```

* Perceived Authentic Leadership on Organizational Trust (X on M1)

REGRESSION

```
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)  
/NOORIGIN  
/DEPENDENT MEAN_OT  
/METHOD=ENTER MEAN_AL_NEW  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/SAVE ZRESID.
```

* Perceived Authentic Leadership on Psychological Empowerment (X on M2)

REGRESSION

```
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)  
/NOORIGIN  
/DEPENDENT MEAN_PE  
/METHOD=ENTER MEAN_AL_NEW  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/SAVE ZRESID.
```

* Organizational Trust on Employee Performance (M1 on Y)

REGRESSION

```
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)  
/NOORIGIN  
/DEPENDENT MEAN_EP  
/METHOD=ENTER MEAN_OT  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/SAVE ZRESID.
```

* Psychological Empowerment (M2 on Y)

REGRESSION

```
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)  
/NOORIGIN  
/DEPENDENT MEAN_EP  
/METHOD=ENTER MEAN_PE  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/SAVE ZRESID.
```

* All Together

REGRESSION

```
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)  
/NOORIGIN  
/DEPENDENT MEAN_EP  
/METHOD=ENTER MEAN_AL_NEW MEAN_OT MEAN_PE  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/SAVE ZRESID.
```

3: Homoscedasticity

```
REGRESSION  
/MISSING LISTWISE  
/STATISTICS COEFF OUTS R ANOVA  
/CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)  
/NOORIGIN  
/DEPENDENT MEAN_EP  
/METHOD=ENTER MEAN_AL_NEW MEAN_OT MEAN_PE  
/SCATTERPLOT=(*ZRESID ,*ZPRED)  
/SAVE ZRESID.
```

4. No causal relationship between the mediators.

```
CORRELATIONS  
/VARIABLES=MEAN_OT MEAN_PE  
/PRINT=TWOTAIL NOSIG FULL  
/MISSING=PAIRWISE.
```

***S11: Descriptives of Variables and Correlations (see Table 3 Main Text)**

```
DESCRIPTIVES VARIABLES=Gender Education Age Tenure Job_Sat MEAN_AL_NEW MEAN_OT  
MEAN_PE MEAN_EP  
/STATISTICS=MEAN STDDEV MIN MAX.
```

NONPAR CORR

```
/VARIABLES=Gender Education Age Tenure Job_Sat MEAN_AL_NEW MEAN_OT MEAN_PE MEAN_EP  
/PRINT=SPEARMAN TWOTAIL NOSIG FULL  
/MISSING=PAIRWISE.
```

*** S12: Main Analysis (Process Model 4). Based on 10.000 bootstrap samples. Adding Total Effect Model selected.**

```
PROCESS Model 4, Y = MEAN_EP, X = MEAN_AL_NEW, M = MEAN_OT, M = MEAN_PE, COV =  
Gender, Education, Age, Tenure, Job_Sat
```

*** S13: Robustness Check, only age groups of 35 - 54 and 55 – 75 (Deleted all respondents aged 15 -34)**

```
PROCESS Model 4, Y = MEAN_EP, X = MEAN_AL_NEW, M = MEAN_OT, M = MEAN_PE, COV =  
Gender, Education, Tenure, Job_Sat
```