The Relationship Between Authentic Leadership and Job Embeddedness: The Mediating Role of Organizational Virtuousness.

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Abstract

Leadership and its impact on organizations have always been a popular and interesting topic among researchers. In recent years, the focus has shifted from what makes the organization successful to what its purpose should be beyond profit. In light of this focus, the question becomes how organizations can maintain their workforce and utilize it to become more profitable and build a sustainable future. With the increasing problem of leadership, which tends to contradict between words and actions, this study aims to continue exploring the style of Authentic leadership and its positive impact on Job embeddedness through the mediating role of organizational virtuousness. A questionnaire was used to collect primary data. The sample size was 252 individuals from the employees at 6th of October University. The results indicated that Authentic leadership has a significant positive influence on Job embeddedness through the mediating role of organizational virtuousness. These results contribute to expanding the research scope on factors influencing employees' behavioral intentions towards job stability and provide important insights into why and how Authentic leadership affects organizational virtuousness and Job embeddedness. This means that when leaders are Authentic and exhibit strong leadership skills, it can lead to better organizational virtuousness within the organization, which in turn can increase Job embeddedness and job stability for employees. Finally, the results were discussed along with the main theoretical and practical contributions and suggestions for future research directions.

Keywords: **Authentic leadership, Organizational Virtuousness, Job Embeddedness.**

العلاقة بين القيادة الأصيلة والرسوخ الوظيفي: الدور الوسيط للاستقامة التنظيمية.

الملخص

لقد كانت القيادة وتأثيرها على المنظمات دائمًا موضوعًا شائعًا ومثيرًا للاهتمام بين الباحثين. في السنوات الأخيرة، تحول التركيز على ما يجعل المنظمة ناجحة من التركيز فقط على الربح، إلى ما يجب أن يكون عليه غرض المنظمة بعد الربح. وفي ظل هذا التركيز يكون التساؤل كيف يمكن للمنظمات الحفاظ على القوى العاملة لديها والاستفادة منها لتصبح أكثر ربحية وبناء مستقبل مستدام. ومع تزايد مشكلة القيادة، والتي تميل إلى التناقض بين كلمات القائد وأفعاله، تهدف هذه الدراسة إلى مواصلة استكشاف أسلوب القيادة الأصيلة وآثاره الإيجابية على الرسوخ الوظيفي من خلال الدور الوسيط للاستقامة التنظيمية في تلك العلاقة. وقد تم الاعتماد على استبانة لتجميع البيانات الأولية. وبلغ حجم العينة (٢٥٢) مفردة من العاملين بجامعة ٦ اكتوبر. وقد أشارت النتائج إلى أن القيادة الأصيلة تؤثر تأثيراً إيجابياً معنوياً على الاستقامة التنظيمية؛ وكذلك تؤثر الاستقامة التنظيمية على الرسوخ الوظيفي، بالإضافة إلى أن الأصيلة تؤثر تأثيراً إيجابياً معنوياً على الرسوخ الوظيفي، واخير توصلت الدراسة إلى أن الاستقامة التنظيمية لها دور الوساطة في العلاقة بين القيادة الجديرة بالثقة والرسوخ الوظيفي. وبالتالي تؤدى هذه النتائج إلى توسيع نطاق البحث حول العوامل المؤثرة على النوايا السلوكية للعاملين للرسوخ الوظيفي وتوفر رؤى مهمة حول لماذا وكيف تؤثر القيادة الأصيلة على الاستقامة التنظيمية والرسوخ الوظيفي وأخيرًا؛ تمت مناقشة النتائج وأهم المساهمات النظرية والتطبيقية، واقتراح اتجاهات بحثية مستقبلية.

الكلمات المفتاحية: القيادة الأصيلة، الاستقامة التنظيمية، الرسوخ الوظيفي.

1- Introduction

Authentic leadership is an extension of positive leadership theories, it provides valuable insight in the organization through building trust relationships, promoting organizational virtuousness and Job embeddedness. (Korku&Kaya, 2023) .

Authentic leadership is a kind of leadership styles that assumes that leaders should act honestly and transparently with others. (Mubashar & Fida ,2023).

Organizational Virtuousness have gained the attention of researchers and practitioners in recent years due to ethical and financial collapses that many organizations have experienced. This has led organizations to focus on establishing positive values and virtues in their work environment, with focus on reviving ethical traditions and promoting ethical behaviors that extend to social relationships within the work environment. (Aubouin & Bonnaventure et al, 2003)

The concept of organizational virtuousness is a manifestation of organizational health, focusing on creating, promoting, and protecting human behavior, establishing high standards of conduct and attitudes through achieving individual and group loyalty and commitment to the organization. It also focuses on individuals with exceptional skills, competencies, and abilities to achieve positive outcomes or benefits for organizations. (Taamneh et al.,2022).

The approach of organizational Virtuousness also emphasizes knowledge and wisdom in dealing with others, fairness and justice among employees, the ability to control oneself, excel in work, to be courageous and take risks, solve challenges and make decisions. (Liang, 2023).

Job embeddedness represents a set of internal and external influences that control employees' decisions to stay in the organization. Internal influences include networks with colleagues, compatibility between employees' skills and job requirements, and the organization's social responsibility towards the community. External influences include commitment to individuals as family and society outside the organization. (Akgunduz et al., 2023, Noor et al.,2023)

This study aims to examine the impact between Authentic leadership and Job embeddedness, with organizational Virtuousness as a mediating variable in this relationship.

2- Theoretical background

The theoretical framework of the study is divided into three main sections. The first section discusses Authentic leadership (independent variable), while the second section discusses organizational Virtuousness (mediating variable). Finally, the third section discusses Job embeddedness (dependent variable) as follows:

2.1 Authentic Leadership (AL)

Authentic leadership is defined as directing individuals towards common goals considering ethical values, such as transparency, altruism, and ethical behavior (Els & Jacobs, 2023). Some researchers see it as a moral response to the decline of religious and civic values. It is also seen as a behavior that improves the psychological state. (Liu & Wong, 2023)

Many researchers define leaders' behavior and organizational ethics, and provide balanced information and transparency in relationships between leaders and subordinates. (Purwanto et al., 2021)

It is defined as leaders' actions based on their values and beliefs. (Novitasari et al. 2020; Farid et al., 2021; Wirawan et al., 2020). It is a behavior that improves the psychological state of employees (Winton et al., 2022). It is also seen as a process that derives from positive self-awareness behavior, and promotes positive self-development for leaders and partners. (Williams et al., 2022; Asghar et al., 2023)

Moreover, it can be considered as creating a positive organizational climate by promoting mutual trust and creating well-being for subordinates, colleagues, and the organization. It is also seen as directing individuals towards common goals in light of values such as transparency, altruism, and ethical behavior (Farrukh et al., 2023). It is also a moral response to the decline of religious and civic values. (Appels et al., 2023).

Authentic leadership can also be seen as a personal identity, as it reflects individuals' psychological structure and self-awareness and perception. (Chang et al., 2020, Bolschakow et al., 2023). On the other hand, individual influence occurs as a result

of their' commitment to certain rules and systems which make them feel self-satisfied with their competence and choices (Zeb et al., 2020).

Authentic leadership can also be considered as a personal identity, as it acts as a personal judgment on social rules that individuals see as necessary for using behavioral patterns (Jung et al., 2022). Therefore, Authentic leaders do not strive for personal returns or gains, but they are role models for others to imitate. Their actions are based on values and beliefs (Farid et al., 2020).

This study relies on the scale presented by (Rego et al. ,2013), as it is one of the most common and widely used scales in previous studies. This scale consists of four dimensions: transparent relationship, ethical behavior, balanced processed and self-awareness. The researcher sees that most researchers agreed on these four dimensions, which led the researchers to rely on them in this research. Each dimension can be defined as follows:

- **Transparent relationship**: This dimension reflects the extent of transparency in the leader's abilities **to** create an atmosphere of mutual trust in relationships, allowing sharing of ideas and emotions. It also refers to trust in the leader's dealings with subordinates by revealing the values and beliefs he holds for others, and openly sharing information.
- **Ethical behavior**: This dimension refers to the leader's self-directed behavior derived from ethical values, beliefs, and principles that act as a driving force when facing difficult decisions or pressures from within or outside the organization.
- **Balanced processing**: It also refers to the leader's ability to define goals, study information accurately and objectively, and listen to different perspectives without bias towards one party over another when making decisions.
- **Self-awareness**: This refers to the process by which the leader understands his strengths and weaknesses through interactions with others, understanding their impressions of him, and realizing the impact of this knowledge on them. It also involves understanding the surrounding variables and then building self-confidence as a leader.

1-2 Organizational Virtuousness (OV)

Organizational virtuousness (OV) is a relatively new concept that has emerged as a result of the moral and financial collapse that has occurred in recent years around the world, and in the business community. It has been discovered at the individual and organizational level to enhance individual performance and organizational efficiency (Ho et al., 2023; Aubouin, et al., 2023).

It is considered an ethical virtue that elevates the hopes, aspirations, and ambitions of leaders and employees, deepens their understanding and perceptions of organizational work, and makes them more positive in their thinking and professional practices, and make them more capable of facing contemporary challenges, and more determined to solve complex problems faced by the organization. (Goyal et al, 2022; AlMemari et al., 2023).

Various studies have pointed out that the concept of organizational Virtuousness is about reviving the traditions of administrative ethics and virtuous behavior, which extends to social relationships within the organization. This is also known as social capital. Furthermore, it works towards improving the lives of members of the organization and stakeholders, increasing organizational efficiency, and encouraging employees to be prepared to support the organization in times of crisis. (Ma et al.,2022; Yousof Boroujerdi et al., 2020).

Many theoretical and empirical studies have addressed the topic of organizational integrity since 2003 through research and studies. Those studies have addressed the concept of Organizational Virtuousness and its role in the success of organizations (Setyoko & Kurniasih, 2022; Heydari et al., 2022; Arshad et al., 2023).

The concept of OV focuses on the human aspect of work, and the spiritual and moral development of the individual, strengthening human relationships among all employees in organizations. It promotes values and feelings of compassion and altruism among them, leading to the physical and mental well-being of employees, and the growth of positive energies at work. It makes ethical decisions that consider the interests of the organization. the conditions and circumstances of its employees (Heydari et al., 2022).

Organizational Virtuousness is defined as "organizational contexts that include virtues (such as optimism, trust, compassion, and integrity) and work to promote, disseminate, and sustain them at the employees and collective levels" (Karahan & Bülbül, 2022). It is also defined as the repeated virtuous behaviors that are supported by policies, practices, and operations within the work environment (Mustafa & Amin, 2023; Aubouin-Bonnaventure et al., 2023).

The researchers relied in their current research on the scale provided by the study of (Cameron et al.,2004) as it is one of the most widely used scales in previous studies. This scale consists of four dimensions: optimism, trust, compassion, and integrity. The researchers believed that most researchers agreed on these four dimensions, which prompted to rely on them in this study. Each of these dimensions is defined as follows (Mustafa & Amin, 2023; Ma et al., 2022; Heydari et al., 2022; Ma et al., 2023).

- **Optimism**: refers to employees' feeling that they will be successful in carrying out their tasks when facing major challenges.
- **Trust** is the belief of the individual and the organizational leader in the goals, decisions, and policies of the organization, and mutual trust among them in terms of intention and behavior. It is also defined as the overall feeling of the organization's entitlement as a trustworthy entity, according to the employee's perception.
- **Integrity:** It means commitment to work according to a set of principles and ethical values. Altruism at the individual level means defending what is fair, just, and acceptable.
- **Compassion**: It is a secondary quality that must be present in every individual or group. It means observation, feeling the suffering of others, and working to alleviate their suffering. Through interaction between them, which lead to enhancing feelings of connection.

1-3 Job Embeddedness

Job Embeddedness is a concept that refers to the interconnectedness between an employee and their social, psychological, and physical network. This network includes work friends, non-work friends, groups, community, and the physical environment in which the employee lives. The more connections an employee has, the more attached they are to the organization. (Ramaite et al,2022).

Job Embeddedness is a combination of psychological, social, and financial factors that influence employee retention. These factors can be work-related, such as relationships with coworkers and alignment between personal skills and job requirements, or non-work related, such as personal commitments to family and community. (Arici et al, 2023). It is a wide range of internal and external forces that affect an employee's decision to stay in the organization." (Akgunduz et al., 2023; Husniati et al., 2024).

It is described as an emotional and cognitive connection to the organization, as it is linked to compatibility with the organization, internal and external relationships, and sacrifices. (Peltokorpi &Sekiguchi, 2023).

It is a set of factors that influence an employee's decision to stay in their job and can be described as a network that the employee is attached to. The more an employee values Job embeddedness, the more interconnected to their network. (Ampofo&Karatepe,2022).

It is also associated with counterproductive work behavior and withdrawal, as employees become more engaged in a professional and social network that makes it difficult for them to leave. It is defined as the forces that affect an employee and their retention in the organization. (Kaviti et al, 2022).

Job embeddedness is a state of counterwork, and refers to the withdrawal, where employees become involved in a professional and social network that makes it undesirable to leave work. (Li et al., 2022).

job embeddedness is defined as "the forces affect employees' retention in their job whether they are internal or external factors. (Vardaman et al., 2023)

It defined job embeddedness as "organizational and societal forces that challenge the employees and affect their decision and prevent them from leaving their job. (Sakinah et al,2023).

Job embeddedness has three main dimensions was introduced before by (Jami et al,2023). the first is the links, which consist of formal or informal connections between individuals, organizations, or groups, and the second is fit, which refers to the degree of comfort employees feel towards their organizations and environments, and the third is

sacrifice, which refers to the material and emotional losses that an employee may bear as a result of leaving their job. (Noor et al., 2023).

Considering the previous definitions, Job embeddedness can be defined as "two forces, one organizational and the other community-related, that affect an employee's retention in the organization and present a challenge that prevents them from leaving their job for any reasons."

Many studies have agreed that job embeddedness consists of three dimensions, as stated by Mitchell et al., 2001, which are: (Links, Fit, and sacrifice). The researcher believes that most researchers agreed on these dimensions, which prompted the researcher to rely on them in his study. It can be defined Each of these dimensions is as follows (Ramaite et al., 2022; AlMemari et al., 2023 & Sekiguchi, 2023 Peltokorpi):

- **Links**: These refer to the formal and informal connections between employees and the organization or other people, that is, the number of connections that an individual builds with the surrounding community and the organization in which he works.
- **Fit**: It refers to the compatibility between employees and their work, and it is a general feeling for the individual in which he sees the connection to the work, and in more detail, the better compatibility there is between the workers, their work, and society, the less likely they are to leave work, and therefore good compatibility inside and outside of work leads to the retention and stability of workers. .
- **Sacrifice**: refers to all the benefits that the worker gives up when he leaves work, or in simpler terms, all the material or psychological benefits that are currently available or that will be available in the future and that the worker will lose when he leaves.

3- Research Problem

Many humans strive to obtain leadership positions, but they often fail in practical reality because they are incompetent leaders. This is due to their failure in three important aspects: lack of care and attention in building a general strategy for their organizations. Failure to develop their personal experiences in the leadership and management field and being preoccupied with daily activities.

Therefore, organizations need to develop and nurture their individuals not only to become competent managers, but also to have genuine loyalty to lead with their full potential and capabilities.

Authentic leadership involves many positive meanings, including self-confidence, sincerity, credibility, sense of importance, and pride in values and ethics.

Authentic leadership behaviors have many positive impacts on organizations, where sound and wise leadership is available, providing opportunities to generate ideas, build trust bridges between leaders and subordinates, and create a positive climate, which contributes to increasing job embeddedness.

Job embeddedness relies on encouraging employees to stay in the organization, and the personal values of the worker and the job objectives should be aligned with the organization's future, organizational culture, and the environmental conditions surrounding the worker. The more these factors increase, the more the individual becomes attached to the organization and his/her job. While acknowledging the importance of studying the impact between Authentic leadership and job embeddedness which is limited due to neglecting mediating variables of Organizational virtuousness which is considered an important variable that could play a significant role in the impact in the theoretical study of this research. The researchers also found, through reviewing previous studies in this field, that there is a lack of intellectual researches in the field of management studies related to the extent of the spread of Authentic leadership and its impact on job embeddedness among workers. In light of the mediating role of organizational virtuousness in this relationship.

The research problem can be formulated in the following questions:

1. To what extent does Authentic leadership affect organizational virtuousness?
2. What is the degree of impact of organizational virtuousness on job embeddedness among employees?
3. Is there is an impact between Authentic leadership and job embeddedness among employees?
4. What is the nature of the mediating role that organizational virtuousness plays in the relationship between Authentic leadership and job embeddedness?

4- Research objective

The research aims to achieve several objectives that can be summarized as follows:

1. To determine the impact between Authentic leadership, organizational virtuousness and job embeddedness
2. To determine the degree of impact of Authentic leadership on job embeddedness
3. To identify the degree of influence of Authentic leadership on organizational virtuousness.
4. To specify the degree of influence of organizational virtuousness on job embeddedness.
5. To determine the impact of the mediating role of organizational virtuousness in the relationship between Authentic leadership and job embeddedness.

5- Research Importance

5.1-Scientific Importance:

1. it is Shedding more light on the topic of Authentic leadership as one of the important topics in leadership, which can have an impact on job embeddedness.
2. Organizational virtuousness is considered one of the modern trends in management, so the researcher seeks to shed light on the concepts and dimensions related to organizational virtuousness, which can play a significant role in the life of organizations.

5.2-Practical Importance:

1. The importance of this study is related to the importance of leadership role and its impact on the performance and sustainability of organizations, as Authentic leadership is one of the appropriate administrative methods for change processes in organizations.
2. To recognize to what extent the studied University adopt the Authentic leadership style and its effectiveness in achieving job embeddedness.
3. Providing a number of recommendations that can contribute to strengthening Authentic leadership, which will have a positive impact on job embeddedness in 6 October University.
4. The practical importance of the study lies in describing the actual reality of the role that Authentic leadership can play in the level of job embeddedness. It also identifies the direct and indirect impacts of Authentic leadership on job

embeddedness, in the context of the mediating role of organizational virtuousness.

6- Research Hypotheses

6.1. Authentic leadership and Organizational Virtuousness

The previous studies aimed to identify the role of Authentic leadership, and organizational virtuousness in reinforcing and support trust and integrity in promoting self-efficacy. By examining the impact between the three variables and by testing the mediating role of organizational virtuousness. The researchers proposed that that there is a significant impact of the dimensions of Authentic leadership (self-awareness, transparent relationships, ethical behavior- balanced processing) on organizational virtuousness, while there was no significant impact found for the balanced processing dimension. Additionally, there is a significant impact of the dimensions of organizational virtuousness (Trust, integrity, optimism, compassion) on job embeddedness while trust did not have a significant impact. The results also showed that organizational virtuousness partially mediates the impact between Authentic leadership and job embeddedness.

The study provided recommendations for enhancing Authentic leadership, organizational virtuousness, and job embeddedness among employees.

This previous study aimed to explore the impact of Authentic leadership in achieving organizational commitment among employees. Knowledge exchange and organizational integrity were used as mediator variables in the study. The results showed a significant positive impact between all the variables. The study also found that the impact of Authentic leadership on organizational virtuousness was significant. Furthermore, the impact of organizational virtuousness on organizational commitment was also found to be significant, while the impact of knowledge exchange on organizational commitment has no significant impact. Regarding the mediation role, both were found to be significant. (Majeed et al.,2020)

This previous study aimed to explore the role of Authentic leadership on employee performance, mediated by organizational Virtuousness, at Isfahan University of Medical Sciences. The data analysis showed that the employees at Isfahan University of Medical Sciences believed that both Authentic leadership and organizational virtuousness

have a significant positive impact on employee performance. The study also found a significant and positive impact of Authentic leadership on organizational Virtuousness.

Based on these findings, it can be said that Authentic leadership leads to organizational virtuousness among employees, and therefore, **the first hypothesis of the study can be proposed as follows**:

H1:"**There is a positive significant impact of Authentic leadership on organizational virtuousness.**

 This can be further divided into the following sub-hypotheses:

H1a: There is a significant impact of self-awareness on organizational virtuousness.

H1b: There is a positive significant impact of transparent relationships on organizational virtuousness.

H1c: There is a positive significant impact of balanced processing on organizational virtuousness.

H1D: There is a significant impact of Ethical behavior on organizational virtuousness.

6.2 Organizational Virtuousness and job embeddedness

The relationship between organizational virtuousness and job embeddedness refers to how the ethical values and positive practices within an organization can influence an employee's sense of connection and commitment to their job and the organization as a whole.

The researchers showed Positive Influence When an organization demonstrates virtuous practices and ethical behavior; it creates a positive work environment. This positive environment can enhance employees' sense of fit, making them feel aligned with the organization's values and purpose. It also promotes positive social connections and relationships, strengthening the links dimension of job embeddedness. (Fred luthans,2021).

It is important to note that the relationship between organizational virtuousness and job embeddedness is complex and can be influenced by various factors, such as individual differences, organizational culture, and external circumstances. However, organizations that prioritize virtuous practices and create a positive work environment are more likely to enhance job embeddedness and foster a committed and engaged workforce.

Although several researchers who have studied the relationship between organizational virtuousness and job embeddedness. but this field of organizational behavior is vast, and there may be other researchers who have contributed to this topic as well. (ThomasW.lee,2022).

Over the past few years, many instances of organizational wrongdoing have prompted management to recognize the significance of organizational virtuousness in workplace environments (Rego et al., 2010).

(Cameron et al. ,2004) proposed the notion of organizational virtuousness (OV), which refers to procedures and behaviors that facilitate the continuation and spread of virtuous behavior inside an organization. by enthusiasm, trust, kindness, honesty, and forgiveness (Ho et al., 2023). Prior research has shown that OV may be cultivated by encouraging the adoption of shared ethical principles, a shared sense of purpose, and cooperative behavior among people (Mion et al., 2023).

Although recent efforts, the field of OV is lacking in theoretical as well as empirical development. Hence, the objective of this investigation is to expand upon previous studies about the personal level consequences of OV.

Based of the above, the researchers expect there to be an impact of organizational virtuousness on job embeddedness, **Therefore, the second hypothesis can be formulated as follows.**

H2: There is a significant positive impact of organizational virtuousness on job embeddedness

This further divided into the following sub –hypotheses:

H2a: There is a significant impact of optimism on job embeddedness.

H2b: There is a significant impact of Trust on job embeddedness.

H2c: There is a significant impact of Integrity on job embeddedness**.**

H2d: There is a significant impact of compassion on job embeddedness

6.3 Authentic leadership and job Embeddedness:

Job embeddedness is defined as ''the combined forces that keep a person from leaving his or her job'' (Birsel & Yurtkoru, 2012; Lee & Sablynski, 2004).

Job embeddedness is including one's links to other aspects of the job (people and groups), perceptions of person-job fit, and sacrifices involved in leaving the job. (Mitchell et al. 2001).

The links aspect of embeddedness suggests that employees have formal and informal connections with other entities on the job and, as the number of those links' increases, embeddedness is higher (Holtom, Mitchell, & Lee, 2006).

Leadership support and high quality leader-member exchange have been suggested as significant factors contributing to employee organizational job embeddedness (Harris, Wheeler, & Kacmar, 2011).

Authentic leaders behave in accordance with their values and strive to achieve openness and truthfulness in their relationships with followers (Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Walumbwa et al., 2010).

Such leaders build trust with their followers by encouraging totally open communication, engaging their followers, sharing critical information, and sharing their perceptions and feelings about the people with whom they work; the result is a realistic social relationship arising heightened levels of personal identification (Avolio et al., 2004).

Study by Jung and Avolio (2000) suggests that leaders may build trust by demonstrating individualized concern (i.e., engagement) and respect (i.e., encouraging diverse viewpoints) for followers.

from social exchange theory (i.e., Blau, 1964) that a realistic social relationship is likely to lead to gestures of goodwill being reciprocated, even to the extent of each side willingly going above and beyond the call of duty (Konovsky & Pugh, 1994).

Hence, the supervisor–subordinate relationship is a key driver of employee turnover intentions and actual turnover behaviors. Finally, subordinates in high quality exchanges are less likely to leave an employer as they would

have to forego the advantages associated with their relationships with their supervisors (Liden, Sparrowe, & Wayne, 1997).

- **Therefore, the researchers proposed the following hypothesis:**

   H3: There is a significant positive impact of Authentic leadership on job embeddedness.

This is further divided into the following sub –hypotheses.

   H3a: There is a significant impact of self-awareness on job embeddedness.

   H3b: There is a significant impact of transparent relationship on job embeddedness.

   H3c: There is a significant impact of balanced processing on job embeddedness.

   H3d: There is a significant impact of Ethical behavior on job embeddedness

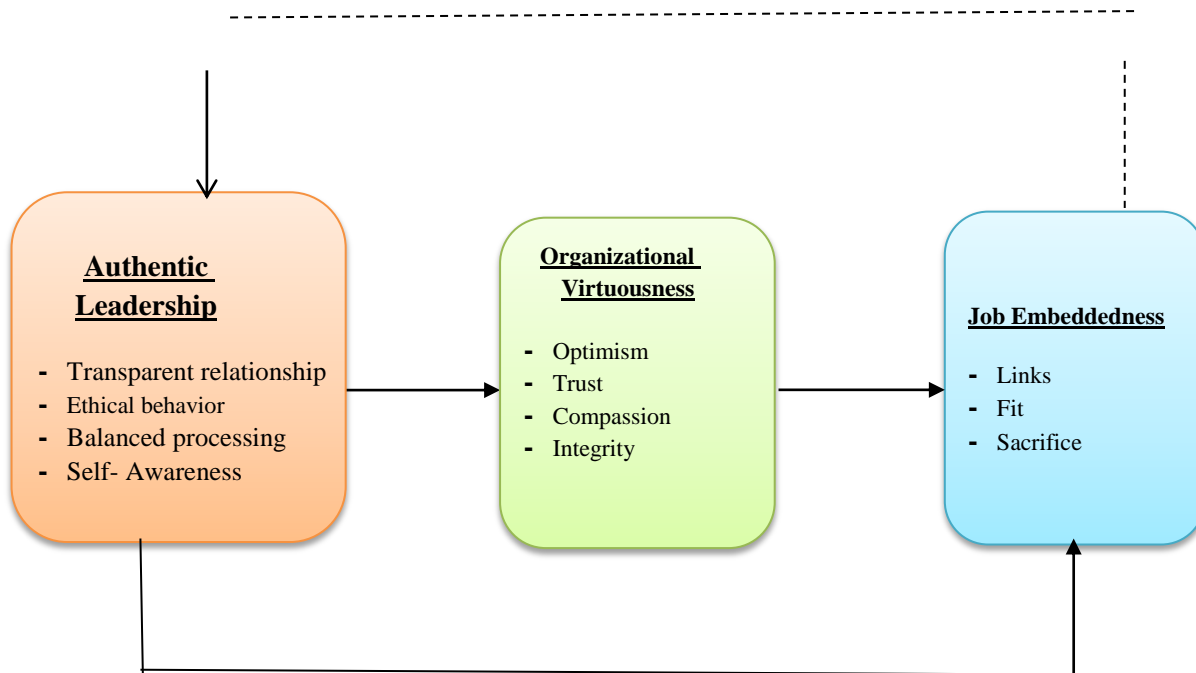## 6.4 The mediating role of Organizational Virtuousness

A previous study aimed to identify the mediating role of organizational virtuousness on the relationship between authentic leadership and employee satisfaction. The results showed that organizational virtuousness can act as a mediator between authentic leadership and employee satisfaction, and the researchers recommend focusing on promoting organizational virtuousness as it can positively influence the relationship between authentic leadership and employee satisfaction (Pires & Nunes, 2014).

Another study aimed to test the direct and indirect impact of organizational virtuousness on the organizational citizenship behaviors of teachers and propose a causal model. The population consisted of all high school teachers, with a sample size of 403 selected through cluster sampling and Morgan's table. The study was conducted through a survey method and used standardized questionnaires with high reliability and validity. The data was analyzed using confirmatory factor analysis and structural equation modeling techniques. The results showed that organizational virtuousness of schools has a direct but insignificant impact on the organizational citizenship behaviors of teachers. The proposed test pattern suggests that organizational virtuousness has a mediating effect on job satisfaction. (Kooshki and Zeinabadi, 2016). Therefore, the researchers also expect that the dimensions of organizational virtuousness play a mediating role in the

relationship between Authentic leadership and job embeddedness among employees. Therefore, the fourth hypothesis can be formulated as follows:

H4:

Authentic Leadership	Organizational Virtuousness	Job Embeddedness
- Transparent relationship - Ethical behavior - Balanced processing - Self- Awareness	- Optimism - Trust - Compassion - Integrity	- Links - Fit - Sacrifice

Organizational virtuousness mediates the relationship between Authentic leadership and job embeddedness among employees

Accordingly, the symbolism of the study can be clarified in the form of. fig 1.

Figure 1. The proposed theoretical model.

7- Research Methodology

The study employs a descriptive analytical approach to examine the relationship between Authentic leadership and job embeddedness applied on 6th October University through analyzing the mediating role of Organizational virtuousness in this relationship. The research methodology includes the study population and sample, measurement of research variables, data collection methods, and data analysis techniques as follows:

7.1: Data Collection

The researcher relied on two types of Data.

7.1.1 – Secondary Data

The researchers collected data through reviewing books, studies, and scientific research in Arabic and foreign languages that addressed the variables of the study, which enabled the researchers to conceptualize and prepared the theoretical framework for the study.

7.1.2 -Primary data: Collected from employees in from 6th October university through distributed questionnaire and analyzed to test the validity and reliability of the study's hypotheses and reach conclusions.

7.2- Study Population and Sample

The study population consists of employees at 6th October University, with a total of 752 individuals. The researchers used the simple random sampling method to determine the study population, through (Bartiett et al., 2010) equation:

$$N=Z\ 2p(1-p)\ /D\ 2$$

N =: where N represents the required sample size.

Z = the standard degree corresponding to a confidence level of 95% (significance level of 5%) and equals 1.96.

P = the proportion of individuals who have the study's characteristics (50%), assuming the largest possible sample size.

D = the degree of accuracy (margin of error) and is equal to 5%.

Using the sample size determination formula, the researchers determined the sample size to be (252) individuals. The researcher also used the snowball sampling method to test the sample.

7.3- Tools for Collecting Primary Data

The researcher used a survey questionnaire to collect field data from primary sources. This questionnaire prepared based on the results of previous research and studies, it included a set of questions to measure the study's variables.

7.4- Measures

7.4.1-Authentic Leadership

This scale includes four dimensions, (Rego et al., 2013), and will rely on the scale (2013) to measure them. The dimensions are: self-awareness, transparent relationships, balanced operations, and ethical behavior.

7.4.2-Organizational Virtuousness

This scale includes four dimensions, (Cameron et al., 2004), and will rely on the scale (2004) to measure them. The dimensions are Optimism, Trust, Integrity, Compassion and Forgiveness.

7.4.3- Job Embeddedness

This scale includes three dimensions, as follows: (Mitchell et al., 2001), and will rely on the scale (2001) to measure them. The dimensions are: links, fit, and sacrifice.

8- Results

the structural equation modeling method using the proposed program WarpPLS.7 to evaluate the proposed model and it consist of two main steps. The first step is to evaluate the measurement model, which is used to assess the validity and reliability of the study's measures. The second step is to evaluate the structural model, which is used to assess the suitability of the proposed model for the study and test the study's hypotheses. (Hair et al., 2021). These steps can be summarized as follows:

8.1- Measurement model

The Measurement Model Assessment includes testing the validity and reliability of the study's measures, as well as testing for common method bias. This can be explained as follows:

8.1.1 Validity Assessment: This test is used to determine the extent of the validity of the statements in the survey questionnaire in measuring what it was designed for. The researcher relied on validity test in the following.

Content validity: To ensure the validity of the survey questionnaire from the scientific perspectives by presenting it to a few expert professors and members of the Academic staff. The questionnaire was also presented to a group of participants and experts in the Human resources field to ensure their understanding of the scale's

statements. The researcher made modifications to the questionnaire based on their feedback.

Convergent Validity: This refers to the degree of convergence between the statements used to measure the variable or one of its dimensions, by ensuring a strong correlation between the statements of the variable being measured. This is measured through the average variance extracted, (AVE) which should be above 0.50 for each dimension or variable being measured The results shown in Table 2 indicate that all values are acceptable (Hair et al., 2021).

Discriminant Validity: This test refers to the degree to which each dimension or variable is different from the other dimensions or variables. This is measured by extracting the (square **root of the AVE**) The results shown in Table 3 indicate that all values are acceptable, as the correlation coefficients of each dimension or variable with itself are higher than its correlation with other variables in the study. This indicates that the scales used have a high degree of validity (Hair et al.,2021).

8.1.2 Reliability Assessment

This test is used to demonstrate the ability of the survey questionnaire to extract the same results if the test is repeated after a specified period of time under similar conditions, and it included the following is.

Indicator Reliability-Individual item: It calculated using standard loadings for each statement of each variable in the study. The results indicated in table (2) that the loadings for each statement of each variable is more than 0.50 which means that values are accepted. (Hair et al.,2021)

Internal consistency reliability: This test can be measured by using both Cronbach's α coefficient.

And **Composite reliability** as following: The researchers applied this test as shown in **(Table 2)** by using Cronbach's α coefficient to assess the reliability of the items included in the questionnaire. The results indicate that the reliability coefficients for the items are acceptable, with Cronbach's α exceeding 0.70, This suggests that the questionnaire demonstrates good internal consistency. (Hair el al,2021).

Composite Reliability (CR): The researcher used another test (CR) to assess the reliability of the latent constructs. Similar to Cronbach's α, a CR value as shown in (Table 2) above 0.70 is considered acceptable, as recommended by (Hair et al. 2021).

Considering the issue of linear multicollinearity and the normal distribution of the data. The evidence includes the acceptable values of skewness and kurtosis; it indicates ($\pm$1). (George & Mallery,1999) This indicates that the scale items tend to have a normal distribution, and the study data does not suffer from the issue of linear multicollinearity, as the Variance inflation factors (VIF) values for each study variables is less than (4.1) as VIF values should not exceed (5) to considered as acceptable values.

Common Method Bias (CMB): The analysis of covariance for all variables from the study revealed significant results in relation to the main hypothesis (based on the empirical work of (Podsakoff et al., 2003), in the field of organizational psychology). This analysis indicates that the correlation pattern among the measurement variables aligns with the theoretical framework of a single underlying construct. Additionally, the examination of the discriminant validity through Harmans' single-factor test showed favorable outcomes for the measurement variables in terms of convergent and discriminant validity. These findings suggest that there is no substantial overlap between the measurement constructs in the study, as their shared variance is totally below 50% m as the percent in this study show (41.97%).

Table 1. Measurement model Assessment.

Constructs	Dimension	Items	Factor loadings	(α)	(CR)	(AVE)
Authentic Leadership	Relational Transparency	**AL1**	**0.606**			
		AL2	**0.734**			
		AL3	**0.503**			
		AL4	**0.741**	**0.897**	**0.911**	**0.634**
	Internalized Moral Perspective	**AL5**	**0.703**	**0.831**	**0.906**	**0.673**
		AL6	**0.543**			
		AL7	**0.612**			
		AL8	**0.670**			
	Balanced processing	**AL9**	**0.702**	**0.756**	**0.821**	**0.517**
		AL10	**0.643**			
		AL11	**0.511**			
		AL12	**0.655**			
	Self- Awareness	**AL13**	**0.527**	**0.865**	**0.705**	**0.611**
		AL14	**0.711**			
		AL15	**0.687**			
		AL16	**0.718**			
Organizational Virtuousness	Optimism	**OV1**	**0.704**			
		OV2	**0.511**			
		OV3	**0.750**	**0.811**	**0.721**	**0.605**
	Trust	**OV4**	**0.632**			
		OV5	**0.775**			
		OV6	**0.610**	**0.721**	**0.787**	**0.527**
	Compassion	**OV7**	**0.702**			
		OV8	**0.784**			
		OV9	**0.563**	**0.798**	**0.721**	**0.509**
	Integrity	**OV10**	**0.671**			
		OV11	**0.798**			
		OV12	**0.641**	**0.721**	**0.819**	**0.727**
	Forgiveness	**OV13**	**0.711**	**0.826**	**0.878**	**0.592**
		OV14	**0.567**			
		OV15	**0.764**			
Job Embeddedness	Links	**JE1**	**0.646**	**0.768**	**0.778**	**0.690**
		JE2	**0.765**			
		JE3	**0.596**			
	Fit	**JE4**	**0.791**			
		JE5	**0.614**			
		JE6	**0.526**			
		JE7	**0.702**	**0.865**	**0.897**	**0.610**
	Sacrifice	**JE8**	**0.654**			
		JE9	**0.709**			
		JE10	**0.612**	**0.868**	**0.904**	**0.654**

Table 2. Discriminant validity

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1. Self-Awareness	0.79**											
2. Relational transparency	0.65**	0.82**										
3. Balanced processing	0.54**	0.72**	0.71**									
4. Moral Perspective Internalized	0.34**	0.56**	0.65**	0.78**								
5. Optimism	0.65**	0.47**	0.44**	0.71**	0.77**							
6. Trust	0.57**	0.41**	0.67**	0.55**	0.67**	0.72**						
7. Compassion	0.53**	0.55**	0.56**	0.54**	0.45**	0.56**	0.71**					
8. Integrity	0.74**	0.65**	0.63**	0.63**	0.65**	0.41**	0.65**	0.85**				
9. Forgiveness	0.54**	0.56**	0.61**	0.48**	0.41**	0.59**	0.67**	0.62**	0.76**			
10. Links	0.68**	0.68**	0.43**	0.46**	0.42**	0.47**	0.54**	0.55**	0.53**	0.83**		
11. Fit	0.65**	0.55**	0.64**	0.43**	0.49**	0.54**	0.44**	0.43**	0.62**	0.63**	0.78**	
12. Sacrifice	0.36**	0.34**	0.62**	0.36**	0.29**	0.30**	0.38**	0.32**	0.43**	0.54**	0.57**	0.80**
Extracted. Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001.												

8.1- Hypotheses Testing

- **The impact of Authentic Leadership on Organizational Virtuousness.**

The results indicate **Table 4** a significant positive impact of Authentic leadership and its dimensions on organizational Virtuousness. The study's findings also suggest that both self-awareness, transparent relationship, balanced processing, and ethical behavior have a significant positive impact on organizational virtuousness. This supports the validity of the study's main hypothesis and its sub-hypotheses.

Table 4.

Testing Results of the impact of Authentic Leadership on Organizational Virtuousness.

Hypothesis	Dependent variables	Independent variables	Path coefficient analysis	Sig	R Square	Hypothesis testing results
	AL	OV	0. 567**	0. 000	43%	
H1a	Self-Awareness		0.271**	0. 030	45%	Supported
H1b	Relational Transparency	OV	0.153**	0. 006		Supported
H1c	Balanced processing		0.210**	0. 004		Supported
H1d	Internalized Moral Perspective		0.458**	0. 003		Supported
Extracted: Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001 no significant (ns).						

- **The impact of Organizational Virtuousness on Job Embeddedness.**

The results indicate **Table.5** a significant positive impact of Organizational Virtuousness and its dimensions on job Embeddedness. The study's findings also suggest that both optimism, trust, compassion, Integrity have a significant positive impact on Job Embeddedness. This supports the validity of the study's Third hypothesis and its sub-hypotheses.

Table 5
Testing Results of the impact of Organizational Virtuousness on Job Embeddedness.

Hypothesis	Dependent variables	Independent variables	Path coefficient analysis	Sig	R Square	Hypothesis testing results
	OV	JE	0. 432**	0. 001	55%	
H1a	Optimism		0.543**	0. 000	61%	Supported
H1b	Trust		0.234**	0. 009		Supported
H1c	Compassion		0.651**	0. 002		Supported
H1d	Integrity		0.642**	0. 004		Supported
H1E	Forgiveness	JE	0.656^{ns}	0. 003		Supported
Extracted: Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001 no significant (ns).						

The impact of Authentic Leadership on Job Embeddedness.

The results indicate **Table.6** a significant positive impact of Authentic leadership and its dimensions on job Embeddedness. The study's findings also suggest that both self-awareness, transparent relationship, balanced processing, and ethical behavior have a significant positive impact on Job Embeddedness. This supports the validity of the study's second hypothesis and its sub-hypotheses.

Table 6.
Testing Results of the impact of Authentic Leadership on Job Embeddedness.

Hypothesis	Dependent variables	Independent variables	Path coefficient analysis	Sig	R Square	Hypothesis testing results
	AL	JE	0. 321**	0. 002	76%	
H1a	Self-Awareness	JE	0.451**	0. 019	65%	Supported
H1b	Relational Transparency		0.334**	0. 002		Supported
H1c	Balanced processing		0.210**	0. 001		Supported
H1d	Internalized Moral Perspective		0.167**	0. 008		Supported
Extracted: Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001 no significant (ns).						

- **The Mediating role of organizational virtuousness**

Regarding the mediating role of organizational virtuousness and its dimension's optimism, trust, integrity, compassion in the impact between Authentic leadership and job embeddedness, the results partially support the sub-hypotheses as illustrated in Table 7. This means that the impact between Authentic leadership dimensions and job embeddedness increases for employees with high organizational Virtuousness, and vice versa.

Table 7
Mediating Organizational Virtuousness In between Authentic Leadership and Job Embeddedness

Hypothesis	Dependent variables	Mediator variables	Independent variables	Direct Path Coefficient	Indirect Path Coefficient	Total Path Coefficient	Hypotheses Testing Results
	Authentic Leadership	Organizational Virtuousness	Job Embeddedness	0. 321**	0.118**	0.439**	Supported
H5a	Self-Awareness			0.451**	0.098*	0.549**	Supported
H5b	Relational Transparency			0.334**	0.236**	0.570*	Supported
H5c	Balanced processing			0.210**	0.179**	0.389**	Supported
H5d	Internalized Moral Perspective			0.167**	0.170**	0.337**	Supported

Extracted: Standardized correlations reported *p < 0.05; **p < 0.01; ***p < 0.001 no significant (ns).

9- Discussion

First: With regard to the relationship between Authentic leadership and its dimensions and organizational virtuousness. The results indicate that Authentic leadership and its dimensions have significant positive impact on organizational virtuousness, these results are consistent with the results of a study of (Majeed et al., 2020; Nawaz & Lai, 2021), which confirmed the presence of a positive impact of Authentic leadership and its dimensions on organizational virtuousness and its dimensions , this indicates that Organizational virtuousness levels can be predicted by measuring the dimensions of

Authentic leadership. Therefore, the more authentic leadership behaviors increase the more this enhances 6 October university's organizational virtuousness practices.

Second: The current study found that there is a positive significant impact of organizational virtuousness on job embeddedness that is the **more** organizational virtuousness practices increase in 6 October university, the more this enhances Job embeddedness among employees, which makes it possible to predict levels of job embeddedness through organizational virtuousness practices.

Third: The results of the proved that there is a significant positive impact of Authentic leadership and its dimensions on job embeddedness, these results are in consistent with the results of the study of (Jamison, 2023; El Sayed & Khaled, 2024), which confirms that there is a positive significant impact between Authentic leadership and job embeddedness, which means that the more 6 October university paid attention toward Authentic leadership practices this will enhance job embeddedness among employees.

Fourth: The results indicate that organizational virtuousness partially mediates the relationship between Authentic leadership and job embeddedness. and this partial mediation is due to the presence of organizational virtuousness as a mediating variable, which created an Indirect impact on Authentic leadership and its dimensions and job embeddedness.

10- Theoretical and Managerial implications

The research contribution of this study lies in several areas:

10.1 Theoretical implications

- Advancing the understanding of Authentic leadership. This research contributes to the existing literature by further exploring the impact of authentic leadership and job embeddedness. It provides empirical evidence on how authentic leadership behaviors influence employees' sense of connection and integration within their work and organization.
- Examining the mediating role of organizational virtuousness: This study investigates the mediating role of organizational virtuousness in the relationship between Authentic leadership and job embeddedness. By examining the mechanisms through

which Authentic leadership influences job embeddedness, the research contributes to a deeper understanding of the underlying processes involved.

- Integrating multiple constructs: The study integrates three important constructs: authentic leadership, job embeddedness, and organizational virtuousness. By considering the interplay between these variables, the research provides a comprehensive framework for understanding how authentic leadership and organizational virtues impact employee job embeddedness.

10.2 Managerial implications

- The findings of this study have practical implications for organizations. By highlighting the positive influence of Authentic leadership on job embeddedness, and the mediating role of organization virtuousness. The research offers insights into strategies that organizations can employ to enhance employee engagement, commitment, and retention. This research can guide organizational leaders in cultivating Authentic leadership qualities and promoting virtuous behaviors within their organizations.

- The study contributes to the broader field of positive organizational scholarship by emphasizing the importance of Authentic leadership and organizational virtuousness in creating positive work environments. It adds to the body of knowledge that promotes ethical and virtuous behaviors within organizations, fostering employee well-being and organizational effectiveness.

- Overall, this research contributes to the existing literature by providing empirical evidence and insights into the relationship between Authentic leadership, job embeddedness, and organizational virtuousness. It has practical implications for organizations and contributes to the broader understanding of positive organizational behavior and leadership.

11- Research Recommendations

Longitudinal Studies: Conducting longitudinal studies will provide a deeper understanding of the causal relationships between Authentic leadership, job embeddedness, and organizational virtuousness. Longitudinal designs can capture changes over time and help establish the temporal order of the variables, strengthening the validity of the findings.

Cross-cultural Studies: Investigating the impact of Authentic leadership, job embeddedness, and organizational virtuousness across different cultural contexts can enhance the generalizability of the findings. Cultural factors may influence the perceptions and effectiveness of Authentic leadership behaviors, as well as the importance of organizational virtuousness in facilitating job embeddedness. Comparative studies across cultures will contribute to a more comprehensive understanding of these relationships.

Qualitative Studies: Supplementing quantitative research with qualitative approaches such as interviews or focus groups can provide rich insights into the experiences and perceptions of employees regarding Authentic leadership, job embeddedness, and organizational virtuousness. Qualitative research can help uncover contextual factors, and subjective interpretations that quantitative measures may not capture fully.

Mediation Mechanisms: Further exploration of the underlying mechanisms through which organizational virtuousness mediates the relationship between authentic leadership and job embeddedness is recommended. Additional research can focus into specific virtuous behaviors (e.g., fairness, tolerance) and their impact on job embeddedness, as well as potential moderation effects of other variables (e.g., forgiveness, organizational support).

12- Limitations and future research

- Generalizability: Like any research study, the findings may be limited in their generalizability to other populations, industries, or contexts. The sample used in the study may not fully represent the diversity of organizations and employees, and caution should be exercised when extending the results to different settings.
- Self-report Measures: The reliance on self-report measures introduces the possibility of common method bias and subjective perceptions of participants. Future research could incorporate multiple sources of data, such as supervisor ratings or objective performance indicators, to enhance the validity and reliability of the findings.
- Reverse Causality: The cross-sectional nature of the research design limits the ability to establish causality definitively. It is possible that job embeddedness or organizational virtuousness may also influence authentic leadership behaviors.

Longitudinal studies can help address this limitation by examining the temporal sequence of the variables.

- Mediation versus Moderation: While the research investigates the mediating role of organizational virtuousness, it is important to acknowledge that moderation effects may also exist. Future research should consider exploring potential moderating variables that could influence the relationship between authentic leadership and job embeddedness.
- Common Method Bias: The research relies on self-report measures from the same respondents, which may lead to common method bias. Researchers should take steps to minimize this bias, such as using anonymous surveys, separating the collection of predictor and outcome variables, and employing statistical techniques like Harman's single-factor test to assess potential bias.
- Finally, addressing these recommendations and limitations will contribute to a more comprehensive understanding of the impact of Authentic leadership on job embeddedness and the mediating role of organizational virtuousness, thereby enhancing the validity and applicability of the research findings.

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Appendix A

Measures and sources

Construct/item and sources
Authentic leadership (Rego et al., 2013)
AL1 My leader says what he means.
AL2 My leader admits mistakes when he talks to management.
AL3 My leader encourages everyone to speak up.
AL4 He tells my leader the truth, no matter how difficult it is.
AL5 My leader displays his actual emotions in a way that is consistent with his own.
AL6 My leader demonstrates that his beliefs match his actions.
AL7 My leader makes decisions based on his core values.
AL8 My leader asks employees to take positions that support their core values.
AL9 My leader looks for feedback to improve interactions with others.
AL10 My leader is keenly aware of how others view his abilities.
AL11 My leader knows when it is time to reevaluate his positions on important issues.
AL12 My leader understands how his actions affect others.
AL13 My leader makes difficult decisions based on high standards of ethical behavior.
AL14 My leader seeks different points of view, even if they challenge existing situations.
AL15 My leader analyzes data related to any topic before making any decision.
AL16 My leader listens carefully to different points of view before reaching any conclusion.
Organizational Virtuousness (Cameron et al., 2004)
OV1 A sense of profound purpose is associated with what we do here.
OV2 In this organization we are dedicated to doing good in addition to doing well.
OV3 We are optimistic that we will succeed, even when faced with major challenges.
OV4 Employees trust one another in this organization.
OV5 People are treated with courtesy, consideration, and respect in this organization.
OV6 People trust the leadership of this organization.

OV7 Acts of compassion are common here.

OV8 This organization is characterized by many acts of concern and caring for other people.

OV9 Many stories of compassion and concern circulate among organization members.

OV10 Honesty and trustworthiness are hallmarks of this organization.

OV11 This organization demonstrates the highest levels of integrity.

OV12 This organization would be described as virtuous and honourable.

OV13 We try to learn from our mistakes here, consequently missteps are quickly forgiven.

OV14 This is a forgiving, compassionate organization in which to work.

OV15 We have very high standards of performance, yet we forgive mistakes when they are acknowledged and corrected

Job Embeddedness (Mitchell et al., 2001)

JE1 the university utilises my skills and talents well.

JE2 I feel like I am a good match for this university.

 JE3 Ifti with the university culture

JE4 I like the authority and responsibility I have at this university.

JE5 My values are compatible with the university values.

 JE6 The perks provided by this university are outstanding.

 JE7 My promotional opportunities are excellent in this university.

 JE8 I am well compensated for my level of performance in this university.

 JE9 The health-care benefits provided by this university are excellent.

JE10 The retirement benefits provided by this university are excellent