

Inclusive Leadership and Its Effect on the Employees' Work Engagement

Applied Study on the Egyptian Tax Authority

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Abstract

The main objective of the research is to determine the effect of the inclusive leadership on employees' work engagement, by applying to Egyptian Tax Authority in Qalyubia Governorate, and by reviewing previous studies in this regard, a proposed model was designed for research hypotheses, clarifying the causal relationships between research variables, based on regression analysis (R2) To clarify the strength of the linear relationship between the research variables using the correlation coefficient (Person).

To collect the primary data, a survey list was designed with two scales: a scale for inclusive leadership and work engagement. The necessary tests were conducted to assess the validity of the research variable models. The survey was directed to a sample of employees in the Egyptian Tax Authority under study and the sample size was (247 employees). The researcher collected 254 questionnaires, but relied on analyzing and interpreting the results of the study on only 247 questionnaires, due to the missing data.

The researcher concluded that there is a positive statistically significant effect of the inclusive leadership in its three dimensions on work engagement, which proves the validity of the first hypothesis, The greater the inclusive behavior of the leaders, the greater the commitment of work engagement, as the researcher found the validity of the second hypothesis in part regarding demographic factors about the inclusive leadership and work engagement in the Egyptian Tax Authority under study and research.

Keywords: Inclusive Leadership (IL), Work Engagement (WE)

1- Introduction

In a dynamic, complicated, ambiguous, and uncertain world, many organizations are decentralizing and redefining employee work activities, organizations demand employees to not only do jobs efficiently within their roles in an increasingly dynamic and changing environment, but also to adapt to challenges and engage in more proactive activities (Zeng et al., 2020)⁽¹⁾, therefore, there is an urgent need for leadership style that help to cope with these changes and impacting an organization's sustained competitive advantage and success (Gong et al., 2021)⁽²⁾.

It turns out that the appropriate leadership style to deal with these changes is the inclusive leadership style (IL), which is built on the relationship of dependency between leaders and employees, and had become the preferred leadership style among most employees, also had grabbed the interest of researchers. (Nembhard and Edmondson, 2006)⁽³⁾ coined the term inclusive leadership to describe leader behaviors that encouraged and valued feedback from others in order to mould team members' ideas that their voices are generally respected. Therefore, researchers believe that inclusive leadership is a type of relational leadership in which leaders pay more attention to followers' behavior and are good at listening to and understanding employees' needs, recognizes employees' contributions, and embraces employees' failures and mistakes; leaders can treat employees fairly and equally with inclusive leadership (Qurrahtulain et al., 2022)⁽⁴⁾.

It was noted that inclusive leadership can be used to inspire employees to contribute more at work and to help them attain their full potential, so that inclusive leadership behaviors can help to create a climate where transparent decision-making and employee participation are possible, because the quality of human capital is critical to the performance of organizations, particularly in uncertain work situations, hence today's organizations require energetic, dedicated, and completely engaged employees (Cenkci et al., 2020)⁽⁵⁾.

Besides, engagement at work was found to boost key employee outcomes like as performance, commitment, health, and retention, so work engagement (WE) is defined as a good, fulfilling state of mind that is marked by vigor, dedication, and absorption at work (Garg et al., 2021)⁽⁶⁾. Work engagement is based upon two elements, according to the job demand-resources (JD-R) model: job resources and personal resources, all physical, social, psychological, and organizational aspects of a job are considered job resources, these resources aid employees in decreasing the negative consequences of job requirements and achieving goals, as well as facilitating workplace improvement, employees can also use personal resources to engage in positive self-evaluation of the organization, and organizations provide personal resources such as supervisory support and positive leader behaviors (Wirawan et al., 2020)⁽⁷⁾.

The researcher believes that employees who are engaged are willing to put their hand, heart, and head into their work, achieving more than those who are

disengaged. So that the concept of inclusive leadership helped employees to be more engaged at work by being physically, cognitively, and emotionally equipped to use and express their preferable self in the workplace, thus work engagement is seen as a crucial component in developing and maintaining a competitive edge for the organization because of its value to the organization (Khan et al., 2021)⁽⁸⁾.

The researcher chose Egyptian Tax Authority as the field of application in studying the effect of the inclusive leadership on employees' work engagement because the Egyptian Tax Authority sector is considered one of the most important sectors, as it aims to (Conducted by the researcher):

- Build confidence in the tax community by providing advanced tax services.
- Reducing the burden on the taxpayer by facilitating the process of filling out and submitting the tax return, as the system provides the ability to fill out and submit the tax return electronically via the web.
- Providing an effective service through the ability of the taxpayer to access his electronic tax system/record through any computer.
- Allocating a storage space for each financier that allows him to store discount and collection transactions under the tax account and access them at any time and from anywhere (cloud storage). Purchases and sales invoices also stored for value-added application.

2-Literature Review

The literature review is divided into three main parts according to the nature of the study:

2.1: A literature review of Inclusive Leadership (IL).

2.2: A literature review of Work Engagement (WE).

2.3: Summary of literature review.

2.1 Literature review of inclusive leadership

Inclusive leadership refers to a supportive, participatory, fair, and fault-tolerant leadership style, and an essential organizational context variable that has a major impact on its subordinate behaviors (Chen et al., 2023)⁽⁹⁾. According to the prior research, the dimensions and measures of inclusive leadership are explained in detail in table 1.1. Several researchers are interested in studying inclusive leadership; some of these researchers will be explained in Table 1/1.

Table 1/1
Literature review of inclusive leadership

No	Author (s)	Objectives	Results
1	Elsaied, (2020) ⁽¹⁰⁾	Investigate the impact of inclusive leadership on job embeddedness.	There is a positive relationship between inclusive leadership (Openness, Availability) and job embeddedness.
2	Bannay et al.	Explore the impact of	There is a positive impact

No	Author (s)	Objectives	Results
	(2020) ⁽¹¹⁾	inclusive leadership behaviors on innovative workplace behavior with an emphasis on the mediating role of work engagement.	between inclusive leadership behaviors such as (openness, accessibility, and availability) and innovative workplace behavior. Whereas work engagement played a mediating role between inclusive leadership and innovative workplace behavior.
3	Jiang et al. (2020) ⁽¹²⁾	Exploring the impact of Inclusive leadership on employees' voice behavior.	There is a significant positive relationship between inclusive leadership (Openness, availability, and accessibility) and employees' voice behavior.
4	Khan et al. (2020) ⁽¹³⁾	Examine the relationship between inclusive leadership and project success, taking into account the mediating roles of psychological empowerment and psychological safety.	There is a significant positive relationship between inclusive leadership (Openness, Accessibility) and project success both directly and indirectly through the mediating roles of psychological empowerment and psychological safety.
5	Al-Atwi and Al-Hassani, (2021) ⁽¹⁴⁾	Aims to to explain the relationship between inclusive leadership and different dimensions of work performance (proficiency, adaptivity, and proactivity) through the mediating role of inclusion perceptions.	There is a positive relationship between inclusive leadership (Openness, Availability, Accessibility) and other aspects of work performance.
6	Aslan et al. (2021) ⁽¹⁵⁾	Examine the effects of inclusive leadership on workplace work engagement.	There is a significant positive impact between inclusive leadership (Openness, Availability, and Accessibility) and work engagement.

No	Author (s)	Objectives	Results
7	Yasin et al. (2023) ⁽¹⁶⁾	Explain the nexus between inclusive leadership and turnover intention as mediated by follower- leader goal congruence and organizational commitment.	Inclusive leadership (Openness, Accessibility) has a positive influence on follower- leader goal congruence which in turn has a positive influence on organizational commitment. Further, organizational commitment has a negative influence on turnover intention.
8	Surucu et al. (2023) ⁽¹⁷⁾	Indicate how and why inclusive leadership is effective in innovative work behaviors.	There is a positive relationship between inclusive leadership (Openness, Availability, and accessibility) and innovative work behaviors through psychological resilience capacity.

Source: by the researcher.

2.2 Literature review of Work Engagement

Work Engagement (WE) is "good, fulfilling state of mind that is marked by vigor, dedication, and absorption at work" (Wen et al., 2023)⁽¹⁸⁾. Hence, to study the dimensions, reasons, measures, and drivers of work engagement, some of these views are clarified in Table 1/2.

Table 1/2
Literature review of Work Engagement

No.	Author (s)	Objectives	Results
1	Garg and Singh (2019) ⁽¹⁹⁾	Look at work engagement as a mediator in the relationship between subjective well-being and work performance, work withdrawal behavior, physical and mental health.	There is a positive significant correlation between work engagement (Vigor, Dedication, and Absorption) and subjective well-being, which in turn improved employee work performance and reduced work withdrawal behavior, mental and physical ill-health.
2	Havold et al. (2020) ⁽²⁰⁾	Evaluate the impact of trust in leaders and work	Work satisfaction and trust in leaders have a substantial

No.	Author (s)	Objectives	Results
		satisfaction on work engagement.	impact on work engagement (Vigor, Dedication, and Absorption).
3	Wirawan et al. (2020) ⁽²¹⁾	Analyze the impact of authentic leadership and psychological capital on work engagement via job satisfaction by employing the job demands-resources model.	Authentic leadership and psychological capital have an indirect effect on work engagement (Vigor, Absorption) via job satisfaction.
4	Sharma and Nambudiri (2020) ⁽²²⁾	Investigate the relationship between work engagement and job crafting and innovativeness.	There is a positive and strong relationship between work engagement (Vigor, Dedication, Absorption), job crafting behavior and innovativeness.
5	Laulie et al. (2021) ⁽²³⁾	Examine the role of work engagement in moderating the negative effect of leader contingent reward behavior on turnover intention.	Employee work engagement (Vigor, Dedication, Absorption) partially mediates the negative effect of leader contingent reward behavior on employee turnover intention.
6	Mubarak et al. (2021) ⁽²⁴⁾	Investigate the relationship between proactive personality and innovative work behavior by introducing the mediating role of work engagement.	Proactive personality has a positive influence on innovative work behavior both directly and indirectly through work engagement (Vigor, Dedication).
7	Bonaiuto et al. (2022) ⁽²⁵⁾	Test the role that organizational socio psychological variables may play in influencing job stress and work engagement in an organizational identity change scenario.	The mediating effect of organizational trust is significant in the relationships of supervisor social support and coworker social support with the “absence of psychosocial risks.” Moreover, an increase in supervisor social support can lead to a statistically

No.	Author (s)	Objectives	Results
			positive and significant increase in work engagement (Vigor, Dedication, and Absorption).
8	Al Badi et al. (2023) ⁽²⁶⁾	Explore the job characteristics and organizational factors that affect work engagement and job performance of nurses.	Justice acted as a moderator of the relationship between job resources and work engagement (Vigor, Dedication, Absorption). As well as nurses with low overall perceptions of justice had stronger links between job resources and work engagement. Even if the level of justice was perceived as low, work engagement (Vigor, Dedication, Absorption) remained unaffected.

Source: by the researcher.

2.3 Summary of literature review

From the previous review of literature, it is shown that

- Most of the previous studies have dealt with IL as including three dimensions represented in (openness, Availability, Accessibility).
- From the previous review of the literature shows that inclusive leadership has a relationship to some variables, such as organizational performance, ambidextrous innovation, job embeddedness, organizational inclusion, psychological empowerment, work engagement, psychological safety.
- Several studies have dealt with WE as having three main dimensions: (Vigor, Dedication, and Absorption).
- From the previous review of the literature shows that work engagement has a relationship to some variables, such as servant leadership, authentic leadership, work satisfaction, psychological capital, workplace spirituality, transformational leadership, inclusive leadership.
- The researcher found that there are no Arab studies that have been interested in studying the influence of IL on WE and few of foreign studies were conducted in foreign environments regarding these two variables, but the population and sample of the current study differed from these previous studies, within the limits of the researcher's knowledge.

3- Research Problem

Some previous studies have indicated that the strength of the positive impact of IL on the WE, as inclusive leadership describes leader behaviors that encouraged and valued feedback from others in order to mould team members' ideas that their voices are generally respected, whereas IL refers to leaders who demonstrate openness, availability, and accessibility when interacting with employees.

By reviewing prior literature, it was found that modern business organizations rely more and more on employees from diverse backgrounds. However, recruiting, training and promoting employees from underrepresented, diverse groups do not guarantee that these employees' talents will be fully used, and their voices will be heard. To encourage employees to make a greater contribution at work and help employees to reach their full potential, IL can be used because IL behaviors can help to create a climate where transparent decision-making, because the quality of human capital is critical to the performance of organizations, particularly in uncertain work situations, today's organizations require energetic, dedicated, and completely engaged employees.

Considering the review of previous studies, the problem of the study can be formulated with several questions that the study seeks to answer, as follows:

- What is the effect of the inclusive leadership on OC?
- What is the effect of the Leaders' openness dimension on the employees' WE?
- What is the effect of the Leaders' availability dimension on the employees' WE?
- What is the effect of the Leaders' accessibility dimension on the employees' WE?
- What is the effect of the following demographic factors (i.e., gender – age - number of years of service –education level- functional degree) on the inclusive leadership and work engagement?

4- Research Objectives

Based on the study problem, a set of objectives have been formulated that the study seeks to achieve:

- Determining and measuring the degree of the effect of inclusive leadership on work engagement.
- Determining and measuring the degree of the effect of the Leaders' openness on the employees' WE.
- Determine and measure the degree of the effect of the Leaders' availability on the employees' WE.
- Determining and measuring the degree of the effect of the Leaders' accessibility on the employees' WE.
- Determining and measuring the degree of the effect of the demographic factors (i.e., gender – age - number of years of service- education level- functional degree) on the inclusive leadership and work engagement.

5- Research Hypotheses and Model

5.1 Research Hypotheses

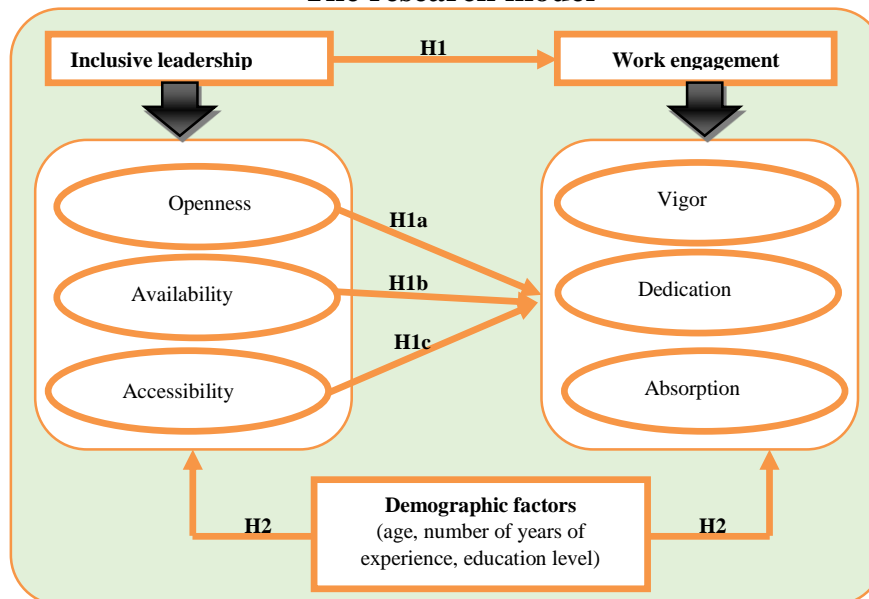
Given the importance of studying, the inclusive leadership and determining the relative importance of its three dimensions (i.e., openness – availability - accessibility) in influencing the work engagement in its three dimensions (i.e., vigor - dedication- absorption) and based on the objectives, the study seeks to test the extent of the following hypotheses are correct:

The major hypothesis

- **H1:** There is a positive effect of statistically significant IL on WE
- **H2:** There is a statistically significant effect of demographic factors on the IL and WE.

5.2 Research Model

Figure 1/1
The research model



Source: by the researcher.

6-Research Importance

Given the importance of studying, the inclusive leadership and determining the relative importance of its three dimensions (i.e., openness – availability - accessibility) in influencing the WE in its three dimensions (i.e., vigor - dedication - absorption), the study was prepared based on its practical and scientific importance as next one:

6.1 Scientific (theoretical) importance

- The lack of Arab and foreign studies interested in studying the effect of IL on WE, within the limits of the researcher's knowledge.
- The study is considered a scientific addition to the Arab library, especially in the absence of studies that clarify the nature of the relationship between the IL on WE.

6.2 Practical (applied) significance

Attempt to draw the attention of leaders of the organizations' understudy to the importance of identifying the extent of the effect of IL on WE.

1. Presenting recommendations and implementation mechanisms that can be used to enhance and increase WE.
2. This study provides leaders with a practical framework through which they can become familiar with the variables that affect the inclusive leadership, enabling these leaders to make the necessary adjustments to improve the employees' work engagement.

7- Research Methods

Research type: Descriptive and Analytical

The researcher (focuses on two types of data to determine and test the research hypotheses.

7.1 Secondary data

Secondary data refers to the data that have been previously gathered and have been used to illustrate and describe the research variables and their dimensions. Hence, the research relies on books, journals, reports, and thesis that are related to the research variables (IL and WE) to collect these data, determine the research problem, to develop the hypotheses.

7.2 Primary data

Primary data represents the data that is collected for the first time by the researcher through a survey using a questionnaire. Collecting primary data requires designing a questionnaire and determining the target population and sample, as shown in the following subsections:

7.2.1 The questionnaire design

To collect data, the researcher relies on a five-point-Likert scale to develop the questionnaire, which includes 39 questions divided into two parts. The first part consists of 22 questions, and it is related to IL dimensions (openness, availability, and accessibility), the second part includes 17 questions related to WE dimensions (vigor, dedication, and absorption). Furthermore, the final part of the questionnaire consists of 5 questions about the demographic factors of respondents (i.e., gender - age – level of education – years of service – functional degree).

7.2.2 Research population.

The target population consists of all employees in the Egyptian tax authority in Qalyubia Governorate, which includes the General tax authority and The Value-Added tax authority (formerly called sales), and the partitions of each authority separately, where there are 11 tax authority in Qalyubia that are divided into 7 General tax authority and 4 Value-Added tax authority.

Based on the researcher's findings, the information is available at the records of the personnel affairs department of the tax authority in Qalyubia Governorate, the total number of employees in the Egyptian tax authority at the time of the survey has recorded (690) employee that are divided into (515)

employee in the General tax authority and (175) employee in the Value-Added tax authority.

7.2.3 The research sample

According to the hypotheses, goals of the researcher, and the availability of community- specific data in the organization in question, the researcher will rely on the stratified random sampling method through statistical sampling tables to represent the research community. As the sample included all the employees of all administrative levels in the Egyptian tax authority in Qalyubia Governorate. It turns out that the sample size is (247) items (Krejcie, 1970)⁽²⁷⁾, as illustrated in statistical tables, given that population size is 690 employees at a confidence level of 95%, and the limits of error of $\pm 5\%$, which are acceptable error limits in social studies. The lists were distributed to the partitions under study (The Egyptian tax authority in Qalyubia).

8- Theoretical Framework

In this part, the researcher will deal with the theoretical framework of the research variables in terms of concept and dimensions.

8.1 Definition of inclusive leadership (IL)

The first author to announce the concept of inclusive leadership (IL) is (Nembhard and Edmondson, 2006)⁽²⁸⁾, according to him inclusive leadership referred to a leader's encouragement and appreciation for the contributions of subordinates in attaining organizational goals, through comprehending employees' challenges and identifying appropriate solutions, where IL attempts to foster interactive relationships between leaders and their subordinates.

However, researchers in the prior study have provided diverse definitions of IL. Some of these definitions are illustrated in table 1\3.

**Table 1\3
Inclusive Leadership definitions**

No	Authors	Definition
1	(Randel et al. 2018) ⁽²⁹⁾ .	Redefined IL as activities that satisfy an employee's demand for uniqueness and belongingness, and highlighting that employee inclusion is dependent on both of these behaviors occurring simultaneously.
2	(Fagan et al. 2022) ⁽³⁰⁾ .	Inclusive leaders should show openness, accessibility, and availability, as they are receptive to fresh perspectives, approachable to staff, and willing to meet with them to learn about their thoughts, hence employees will exhibit a positive attitude when they sense the leader's esteem.
3	(Ashikali et al. 2021) ⁽³¹⁾ .	Added that IL is a win-win situation for both leaders and subordinates, highlighting the role of subordinates in this interaction, as well as inclusive leaders make unbiased judgements, learn from, and encourage their followers, and are concerned about their expectations and feelings.

No	Authors	Definition
4	(Peng and Li 2023) ⁽³²⁾ .	IL focuses on being people-oriented, fair, and supporting organizational cohesiveness and individuality, and valuing leadership-employee relationships, which encourages employee involvement, also explained that IL tries to foster a workplace in which diversity is valued, opposing ideas are fostered, and subordinates feel a feeling of ownership and belonging.

Source: Prepared by the research.

8.2 Dimension of (IL)

Table 1\4
Dimensions of IL

Dimensions	Openness	Availability	Accessibility
Definition	Focuses on the leader being distinguished by being open to hearing new ideas from working individuals. As well as the leader's ability to communicate with working individuals and seeks to create new opportunities to improve the working methods of the organization.	Supports the strengthening of how the leader deals with the working individuals by knowing the ideas that are going on in their minds and involving them in decision-making processes because they are more knowledgeable about the work they perform.	Addresses the extent of the individual's ability to reach his leader in the work, share his ideas and present the obstacles that he is exposed to while working.

Source: by the researcher based on, (Rodriguez, 2018)⁽³³⁾, and (Qi et al., 2019)⁽³⁴⁾.

8.3 Concept and dimensions of work engagement (WE)

Table 1\5
Work Engagement definitions

No	Authors	Definition
1	(Ahmad et al. 2022) ⁽³⁵⁾ .	Defined WE as a pleasant, contented mental state linked with work that is characterized by vigor, dedication, and absorption, additionally, independence, or perceptions of control, is another quality that may be associated to WE.
2	(Clarke, 2021) ⁽³⁶⁾ .	Focuses on a person's psychological state and can stem from both the individual and the workplace culture. What's more, the concept of employees who

No	Authors	Definition
		maintaining a mental presence in their work was argued to be the foundation of workplace engagement.
3	(Zhai, 2023) ⁽³⁷⁾ .	Is a continuous emotional mental process that is not centered on any one particular object, event, person, or action.

Source: Prepared by the researcher.

8.4 Dimension of work engagement (WE)

- **Vigor:** Is a phase of engagement characterized by extreme levels of vitality, mental fortitude, readiness to put forth effort, and displaying perseverance in the face of challenges (Sarmiento, 2022)⁽³⁸⁾.
- **Dedication:** Is a sense of significance, pride, and enthusiasm about one's work, more specifically, it is characterized by a sense of challenge, a strong sense of meaning and purpose in one's work (Aldabbas et al., 2022)⁽³⁹⁾.
- **Absorption:** Is a state of being fully absorbed and deeply engrossed in one's job, which causes time to fly by and minimizes awareness of one's surroundings (Laulie, 2021)⁽⁴⁰⁾.

9- Field Study

9.1 The survey groups

The total sample size can be determined by the following formula (Kish 1965):

$$n = \frac{N \cdot p(1-p)}{N \cdot \left(\frac{\alpha}{z_{\frac{\alpha}{2}}}\right) + p(1-p)}, \quad n = \frac{690 \cdot 0.25}{690 \cdot (0.05/1.96) + 0.25} = 246.7 \approx 247$$

The researcher distributed more than 247 questionnaires to all employees in the Egyptian tax authority under study (The Egyptian tax authority in Qalyubia). Then collected 254 questionnaires, but relied on analyzing and interpreting the results of the study on only 247 questionnaires, based on the results of the previous equation and due to the missing data as well.

9.2 The reliability and validity statistics

To determine the validity and reliability of the tool used to measure the responses of the items sampled, the researcher used both the internal consistency coefficient to measure the validity of the results achieved for each item of the investigation, and Alpha Cronbach's coefficient to measure the reliability of the study items, and the results were as in the following table:

Table 1/6
The reliability and validity of statistics

Study Variables	No. of Items	Cronbach's Alpha	Validity Coefficient	Sig. (2-tailed)
The inclusive leadership	22	.923	---	.000
Openness	7	.815	.861**	.000
Availability	9	.823	.891**	.000

Study Variables	No. of Items	Cronbach's Alpha	Validity Coefficient	Sig. (2-tailed)
Accessibility	6	.833	.890**	.000
The work engagement	17	.864	---	.000
Vigor	7	.803	.814**	.000
Dedication	6	.854	.859**	.000
Absorption	4	.618	.725**	.000
The questionnaire as a whole	39	.919	---	---

Source: Prepared by the researcher based on the results of the statistical analysis (SPSS).

The previous table shows that the Alpha Cronbach's coefficient is greater than 60% for all the study's dimensions, in addition, the Alpha Cronbach's coefficient for the questionnaire as a whole is equal to (.919) and therefore can be depended on to measure the study's dimensions of the questionnaire. **This confirms that** the questionnaire measures what it was built for, that all items of the study are clear to the respondents (employees, department head, department manager, general manager) and that there is no ambiguity if the researcher applies the questionnaire a second time to the same sample will give almost the same results. The values of internal consistency coefficients in most dimensions are close to the correct one, indicating that the internal consistency between questions of the questionnaire is very strong and acceptable.

9.3 Descriptive Statistics and (T-test)

9.3.1 Descriptive Statistics and T-test for the independent variable (Inclusive leadership)

Table 1/7
Descriptive Statistics-test test for items of "Openness"

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
My manager is open to hearing my new ideas.	4.15	.810	.052	22.305	.000
My manager is constantly looking for new opportunities that improve internal operations.	4.18	.693	.044	26.716	.000
My manager constantly follows up on the planned goals to make sure that they are achieved.	4.20	.732	.047	25.810	.000
My manager lets me to participate in decision making.	3.83	.888	.057	14.753	.000

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
My manager publicly motivates me when I successfully complete my tasks.	4.17	.787	.050	23.298	.000
My manager supports the interaction process across departments.	3.98	.786	.050	19.517	.000
My manager recognizes the contributions of employees to achieve strategic goals.	4.11	.740	.047	23.636	.000

Source: Prepared by the researcher based on the results of the statistical analysis (SPSS).

The previous table shows that the mean of all items is more than (3), which means that most of respondents (all the employees in the Egyptian tax authority) agree about all items of "Openness ". In addition to the level of significance for these items is less than 0.01 ($Sig < 0.01$), therefore, it can be concluded that all items are statistically significantly, which confirms that there is an agreement about these items.

The standard deviation ranges from (0.693:0.888) and is a small percentage and the coefficient of variation for all items is less than 10%, which indicating that the dispersion in most sample' answers to these items is low.

Table 1/8
Descriptive Statistics and T- test for items of "Availability"

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
My manager consults with my coworkers on work problems.	4.16	.773	.049	23.554	.000
My manager specifies when employees can reach him.	3.90	.914	.058	15.518	.000
My manager announces tasks to all employees in a clear way.	4.22	.756	.048	25.404	.000
The presence of my manager at work enhances my determination.	4.06	.834	.053	20.073	.000
My manager encourages me to ask questions about work.	4.05	.795	.051	20.733	.000

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
My manager is always available with the work teams to deal with any difficulties may arise.	4.07	.695	.044	24.275	.000
My manager makes training opportunities equally available to all employees.	4.03	.801	.051	20.262	.000
My manager evaluates the performance of all my coworkers equitably.	3.98	.821	.052	18.676	.000
My manager makes resources equally available to all employees.	3.92	.787	.050	18.352	.000

Source: Prepared by the researcher based on the results of the statistical analysis (SPSS).

The previous table shows that the mean of all items is more than (3), which means that most of respondents (all the employees in the Egyptian tax authority) agree about all items of "Availability". In addition to the level of significance for these items is less than 0.01 ($Sig < 0.01$), therefore, it can be concluded that all items are statistically significantly, which confirms that there is an agreement about these items.

The standard deviation ranges from (0.695:0.914) and is a small percentage and the coefficient of variation for all items is less than 10%, which indicating that the dispersion in most sample' answers to these items is low.

Table 1/9
Descriptive Statistics and T- test for items of "Accessibility"

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
My manager encourages everyone to access him on emerging issues.	4.12	.715	.045	24.578	.000
My manager tries to create an atmosphere in which everyone feels a sense of belongingness	3.98	.819	.052	18.807	.000
My manager allows me to speak in discussions without hesitation.	4.21	.825	.053	23.124	.000
My manager makes it easy for me to access the information I need.	4.09	.760	.048	22.525	.000

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
My manager does not blame me in public when something went wrong until he contacts me first.	3.96	.917	.058	16.522	.000
My manager lets me inquire about challenges that I face at work.	4.11	.659	.042	26.553	.000

Source: Prepared by the researcher based on the results of the statistical analysis (SPSS).

The previous table shows that the mean of all items is more than (3), which means that most of respondents agree about all items of "Accessibility ". In addition to the level of significance for these items is less than 0.01 ($Sig < 0.01$), therefore, it can be concluded that all items are statistically significantly, which confirms that there is an agreement about these items.

The standard deviation ranges from (0.659:0.917) and is a small percentage and the coefficient of variation for all items is less than 10%, which indicating that the dispersion in most sample' answers to these items is low.

9.3.2 Descriptive Statistics and T-test for the dependent variable (Work Engagement)

Table 1/10
Descriptive Statistics and T-test for items of "Vigor"

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
At my work, I am very resilient, mentally.	4.23	.734	.047	26.455	.000
I feel bursting with energy at my work.	4.26	.704	.045	28.202	.000
I am completely focused on the task that I have to do.	4.36	.654	.042	32.789	.000
I feel like going to work when I get up in the morning.	4.09	.829	.053	20.561	.000
I can continue working for very long periods at a time.	3.91	.915	.058	15.643	.000
I have a strong personality among my coworkers.	4.25	.738	.047	26.560	.000
I always persevere at my work even when things do not go well.	4.28	.692	.044	29.065	.000

Source: Prepared by the researcher based on the results of the statistical analysis (SPSS).

The previous table shows that the mean of all items is more than (3), which means that most of respondents agree about all items of "Vigor ". In addition to

the level of significance for these items is less than 0.01 ($Sig < 0.01$), therefore, it can be concluded that all items are statistically significantly, which confirms that there is an agreement about these items of the vigor dimension.

The standard deviation ranges from (0.654:0.915) and is a small percentage and the coefficient of variation for all items is less than 10%, which indicating that the dispersion in most sample' answers to these items is low.

Table 1/11
Descriptive Statistics and T- test for items of "Dedication"

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
I have a strong desire to perfect my work.	4.53	.589	.038	40.915	.000
I am inspired and deeply influenced by my work.	4.26	.624	.040	31.796	.000
I am enthusiastic about the work that I accomplish.	4.44	.647	.041	35.024	.000
I consider my work a challenge to me.	4.33	.751	.048	27.871	.000
I find the work that i do full of meaning and purpose.	4.36	.684	.044	31.334	.000
I am proud of the work I do.	4.38	.675	.043	32.064	.000

Source: Prepared by the researcher based on the results of the statistical analysis (SPSS).

The previous table shows that the mean of all items is more than (3), which means that most of respondents agree about all items of "Dedication ". In addition to the level of significance for these items is less than 0.01 ($Sig < 0.01$), therefore, it can be concluded that all items are statistically significantly, which confirms that there is an agreement about these items of the dedication dimension.

The standard deviation ranges from (0.589:0.751) and is a small percentage and the coefficient of variation for all items is less than 10%, which indicating that the dispersion in most sample' answers to these items is low.

Table 1/12
Descriptive Statistics and T- test for items of "Absorption"

Items	Mean	Std. Deviation	Coef. of variation	T-test	Sig.
Time flies when I am working.	4.06	.738	.047	22.580	.000
I forget everything else around me when I am working.	3.97	.724	.046	21.104	.000
It is difficult to detach myself from my work.	3.59	.958	.061	9.628	.000
I am immersed in my work.	3.94	.819	.052	18.091	.000

Source: Prepared by the researcher based on the results of the statistical analysis (SPSS).

The previous table shows that the mean of all items is more than (3), which means that most of respondents agree about all items of "Absorption ". In addition to the level of significance for these items is less than 0.01 (*Sig* < 0.01), therefore, it can be concluded that all items are statistically significantly, which confirms that there is an agreement about these items of the absorption dimension.

The standard deviation ranges from (0.724:0.958) and is a small percentage and the coefficient of variation for all items is less than 10%, which indicates the dispersion in most sample' answers to these items is low.

9.4 Tests of hypotheses

9.4.1 The first main hypothesis: There is a positive effect of statistically significant of the inclusive leadership on work engagement in the Egyptian tax authority under study.

To test this hypothesis, the researcher used **structural model** and obtained the following results:

Table 1/13
Results of the structural model.

Regression Weights					
Parameter	Estimate	S.E.	C.R.	P- value	R ²
Work Engagement	.299	.059	5.053	.0001	.243

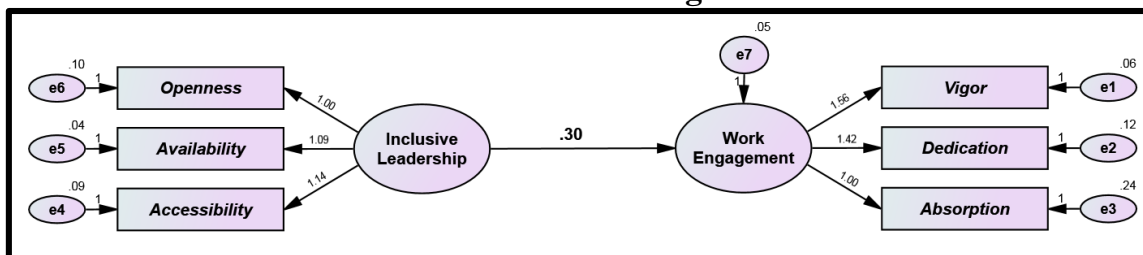
Source: Prepared by the researcher based on the results of the statistical analysis (AMOS).

The previous table shows the critical ratio of independent variable (inclusive leadership) is more than the value (± 1.96) in addition, the level of significance is less than 0.01 (*sig*< 0.01), which indicates that this variable has statistical significance for dependent variable (work engagement).

The regression coefficient is positive, which means that there is a positive relationship between independent variable (inclusive leadership) and dependent variable (work engagement).

The **coefficient of R-square** is equal (24.3%) this is the percentage of the effect of independent variables (inclusive leadership) on dependent variables (work engagement) and the rest of the percentage is due to random error or may be due to other independent variables not included Model. The estimation model is as follows:

Figure 1\2
Structural model diagram



According to the previous results we accept the hypothesis, which means that there is a positive effect of statistically significant of the inclusive leadership on work engagement in the Egyptian tax authority under study.

9.4.2 The first branch hypothesis: There is a positive effect of statistical significance of the Leaders’ openness dimension on employees’ work engagement in the Egyptian Tax Authority under study.

To test this hypothesis, the researcher used linear regression by (AMOS) and obtained the following results:

Table 1/14
Linear Regression Model

Regression Weights					
Parameter	Estimate	S.E.	C.R.	P- value	R ²
Intercepts	2.974	.185	16.060	.0001	.147
Work Engagement	.293	.045	6.523	.0001	

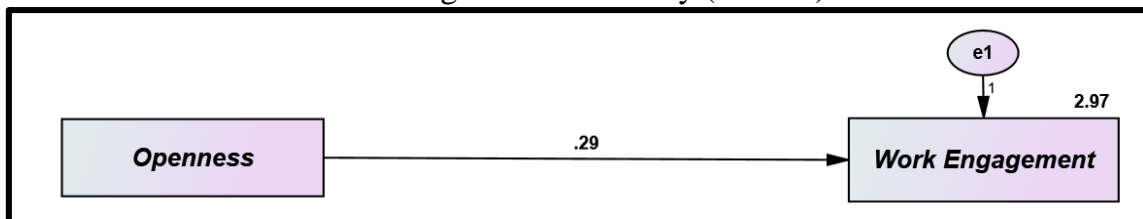
Source: Prepared by the researcher based on the results of the statistical analysis (AMOS).

The previous table shows the critical ratio of independent variable (Openness) is more than the value (± 1.96) in addition, the level of significance is less than 0.01 ($\text{sig} < 0.01$), which indicates that this variable has statistical significance for dependent variable (work engagement).

The regression coefficient is positive, which means that there is a positive relationship between independent variable (Openness) and dependent variable (Work Engagement).

The **coefficient of R-square** is equal (14.7%) this is the percentage of the effect of independent variables (Openness) on dependent variables (work engagement) and the rest of the percentage is due to random error or may be due to other independent variables not included Model. The estimation model is as follows:

Figure 1\3
Linear regression model by (AMOS)



According to the previous results we accept the hypothesis, which means that there is a positive effect of statistical significance of the Leaders’ openness dimension on work engagement in the Egyptian Tax Authority under study.

9.4.3 The second branch hypothesis

There is a positive effect of statistical significance of the Leaders’ availability dimension on work engagement in the Egyptian Tax Authority under study.

To test this hypothesis, the researcher used linear regression by (AMOS) and obtained the following results:

Table 1/15
Linear Regression Model

Regression Weights					
Parameter	Estimate	S.E.	C.R.	P- value	R ²
Intercepts	3.126	.195	15.991	.0001	.106
Work Engagement	.258	.048	5.390	.0001	

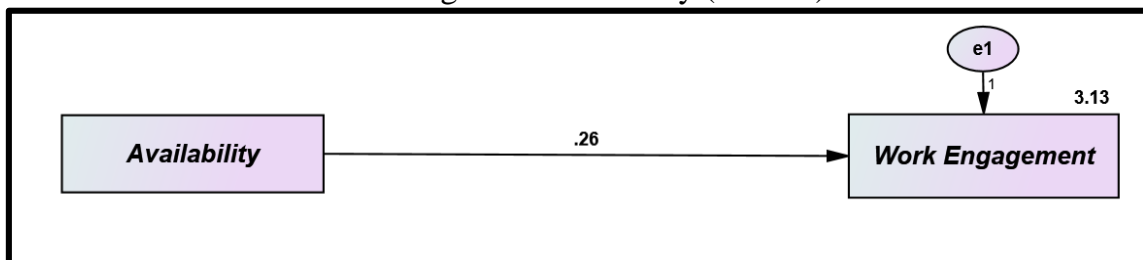
Source: Prepared by the researcher based on the results of the statistical analysis (AMOS).

The previous table shows the critical ratio of independent variable (Availability) is more than the value (± 1.96) in addition, the level of significance is less than 0.01 ($sig < 0.01$), which indicates that this variable has statistical significance for dependent variable (work engagement).

The regression coefficient is positive, which means that there is a positive relationship between independent variable (availability) and dependent variable (work engagement).

The **coefficient of R-square** is equal (10.6%) this is the percentage of the effect of independent variables (Availability) on dependent variables (work engagement) and the rest of the percentage is due to random error or may be due to other independent variables not included Model. The estimation model is as follows:

Figure 1\4
Linear regression model by (AMOS)



According to the previous results we accept the hypothesis, which means that there is a positive effect of statistical significance of the Leaders’ availability dimension on work engagement in the Egyptian Tax Authority under study.

9.4.4 The third branch hypothesis: There is a positive effect of statistical significance of the Leaders’ accessibility dimension on work engagement in the Egyptian Tax Authority under study.

To test this hypothesis, the researcher used linear regression by (AMOS) and obtained the following results:

Table 1/15
Linear Regression Model

Regression Weights					
Parameter	Estimate	S.E.	C.R.	P- value	R ²
Intercepts	3.164	.173	18.272	.0001	.123
Work Engagement	.247	.042	5.873	.0001	

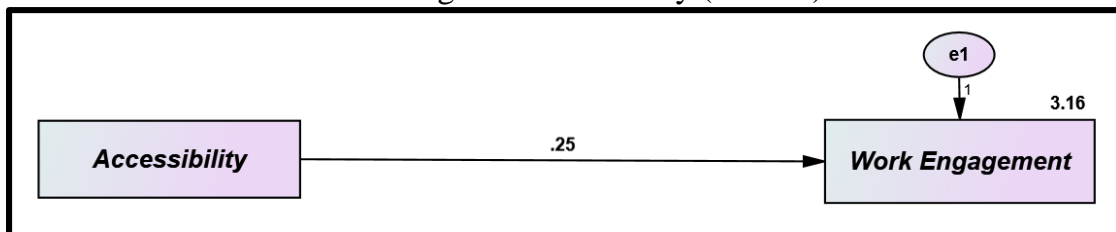
Source: Prepared by the researcher based on the results of the statistical analysis (AMOS).

The previous table shows the critical ratio of independent variable (accessibility) is more than the value (± 1.96) in addition, the level of significance is less than 0.01 ($\text{sig} < 0.01$), which indicates that this variable has statistical significance for dependent variable (work engagement).

The regression coefficient is positive, which means that there is a positive relationship between independent variable (accessibility) and dependent variable (work engagement).

The **coefficient of R-square** is equal (12.3%) this is the percentage of the effect of independent variables (accessibility) on dependent variables (work engagement) and the rest of the percentage is due to random error or may be due to other independent variables not included Model. The estimation model is as follows:

Figure 1\5
Linear regression model by (AMOS)



According to the previous results, we accept the hypothesis, which means that there is a positive effect of statistical significance of the Leaders' accessibility dimension on work engagement in the Egyptian Tax Authority under study.

10- Research Recommendations

In light of what was observed of the importance and role of the inclusive leadership for all employees in organizations, and at all organizational levels, and its role in enhancing the employee's work engagement, in addition to encouraging employees not only to perform their basic tasks at work but also to play additional roles that help in completing the basic tasks and achieving

organizational goals. In light of the research results, the following recommendations can be made:

- Encourage leaders to actively seek and consider diverse perspectives and ideas from employees at all levels.
- Schedule regular one-on-one meetings with employees to address their concerns, provide guidance, and offer support.
- Offer opportunities for professional development and growth to keep employees motivated and engaged.
- Provide employees with the necessary resources and support to excel in their roles.

11- Future Research

- A study of the relationship between the inclusive leadership and work engagement to various other sectors, for example private sector organizations.
- Studying the impact of one of the emerging leadership styles, for example (Distributed leadership or Agile leadership) on work engagement.
- Studying the impact of inclusive leadership on the types of capital, for example (psychological capital, Social capital).
- Studying the effect of inclusive leadership and psychological safety on work engagement in the presence of demographic variables such as gender, age, and education level as mediating variables.

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