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The Role of Digital Transformation in Improving the Quality of Work life:
Empirical Case Study of the Egyptian Electricity Holding Company

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دور التحول الرقمي في تحسين جوده حياة العمل:
دراسة حالة تطبيقية على الشركة القابضة لكهرباء مصر

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Abstract

Recently, digital transformation has become one of the most important challenges that face all governmental institutions. The public sector in Egypt has witnessed significant digital transformation, which helps the governmental institutions improve the quality of services and enhance the quality of work life which has become an essential issue for any institution. The main objective of this research is to find out new methods to improve the quality of work life in public sector enterprises in general, and evaluate the current situation in the Egyptian Electricity Holding Company (EEHC) in particular, through an investigation of the role of digital transformation. The researcher applied an empirical study on the EEHC, as it is considered one of the key elements for sustainable development in Egypt. Additionally, the research seeks to keep up with the latest global changes in technology. The methodology adopted is both descriptive/analytical, which is found in the theoretical part, and quantitative, found in the empirical part. The survey was distributed to 250 EEHC employees in January 2023. The most important findings of this research are the positive and significant relationship between digital transformation and the quality of work life, as well as the highest significant positive impact of digital transformation on compensation and rewards—the most important factor of the quality of work life. The paper ends up with some recommendations to the EEHC's officials that provide a better understanding of the factors of the quality of work life, and henceforth the decision-making process.

Keywords: Digital transformation, e-government, the quality of work life, public sector, governmental institutions

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Introduction

Digital transformation has become an essential challenge for organizations. The concept of digital transformation generally revolves around changing the organization's processes and systems, gaining operational flexibility, optimizing services, managing innovation, and improving the employee's skills and competencies, thus providing an opportunity for all organizations to make a complete renovation of the work systems (Legner et al., 2017). Also, digital transformation can generate a new digital mentality, culture and behavior that can be applied by managers and employees in the organization (Ochoa, 2016). Digital transformation has also been reflected on public sector institutions as they have witnessed a great development, and this became evident through the quality of work, services provided, and the level of service performance, in terms of speed, quality, and accuracy. In this context, quality of work life gains its importance as it promotes employee satisfaction by providing them with career growth, job security, and rewards and also by making the balance between private life and work life. Therefore, it helps achieve high profit and enhance performance.

The importance of the research is derived from the increasing interest of public institutions in applying digital transformation as well as the increasing interest in the quality of work life, in addition to finding out new methods to improve the quality of work life in the public sector.

The researcher has chosen the Egyptian Electricity Holding Company (EEHC) because it is considered one of the key elements of sustainable development in Egypt. In addition, it pays more attention to the latest global changes in technology. It believes in the human element and its major contribution to achieving goals and boosting the production process. The leadership at EEHC seeks continuous development of human resource capabilities in order to be able to deal with innovations and technological advancements.

The methodology adopted in this study is both a descriptive/analytical approach which is found in the theoretical part and a quantitative approach which is found in the applied study. The surveys were distributed among 250 of EEHC employees in January, 2023.

After the introduction, the study presents literature review that clarifies the terms digital transformation and quality of work life and its factors, followed by determining the problem statement, variables, and the research hypothesis, evaluating the current situation of the factors of work life that are affected by digital transformation in the Egyptian Electricity Holding Company, and it presents research findings and results, and ends up with recommendations for decision-making process.

Literature review

Digital transformation

Digital transformation, in general, refers to a comprehensive and radical shift in the use of technology. Many researchers defined digital transformation in different ways. Berman (2012) defined it as the way of using the digital technologies in order to satisfy customers' needs. In this regard, Fitzgerald et al. (2013) defined it as the use of new models of digital technologies in order to simplify the operational activities and improve the experience of users of services and products. Furthermore, Kwon and Park (2017) considered that digital transformation as the conversion of analogue information to automation or digital processes, this conversion will initiate changes in the organizational structure, business model, processes and other aspects of business.

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The importance of digital transformation

According to literature review, most researches clarified the meaning of digital transformation and explained its importance as follows:

- It is the ability to change people's life by reshaping methods of work, improve the productivity and resource efficiencies.
- It seeks to change the culture for the employees to gain new skills and be able to achieve excellence in digital work.
- It applies new and innovative business models, and improve the regulatory framework and technical standards.
- It enhances digital data protection, transparency, principle of integrity and trust (Kutnjak et al., 2019; Martin, 2008).

Quality of Work Life

It can be defined as a set of planned, integrated, and continuous processing that aims to improve the different aspects that affect the employees' personal lives and work lives, which contribute to achieving the objectives of the organization, clients and employees (Jad El Rab, 2008). In 2001, Allen also defined it as a set of efforts that can improve the organizational productivity through improving human resources. According to Florence and Nirmala (2014), quality of work life is a concept which considers employees the most important resource in any organization, which means developing work environment to ensure that it stimulates their creative abilities. Korunka et al. (2008), state that improving quality of work life is a prerequisite for increasing the organizational productivity, also helps the organizations to achieve better productivity, gain competitive advantage and enhance employee's dignity.

Factors of quality of work life

There are several factors that affect quality of work life stated by renowned authors in their researches. For example, Walton (1975) suggested eight major factors: adequate and fair compensation; develop human capacities; safe and healthy working conditions; opportunity for growth and security; social work life; social integration in the work organization; work and total life space; and constitutionalism in the work organization. Sanjeev et al. (2016); Mishra and Pathak (2013) focused on workload, job security, reward systems and higher pay, physical environment, and job stress.

Sinha (2012) suggested 12 factors of quality of work life; these are: communication; career development & growth; organizational commitment; emotional supervisory support; flexible work arrangement; family-responsive culture; employee motivation; organizational climate; organizational support; job satisfaction; rewards & benefits; and compensation.

After analyzing the literature review, the research selected some factors that were agreed upon by most researchers to find the way to improve the quality. These factors are:

Compensation and rewards. It is a type of income the employees receive based on a work relationship, it can be divided into categories: direct compensation such as: basic salary, overtime, pay and bonuses; and indirect compensation such as: educational assistance, insurance, protection programs and feelings of progress.

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Safe and healthy working conditions. This factor is an important issue in all organizations. Work conditions should be comfortable for the employees (devoid of noise, heat, chemical, radiological, and biological effects) to enable them to perform in a better way and ensure safety for workers who are operating dangerous machines and equipment**.**

Organizational climate. It is related to the work environment; better work environment enhances an employee's efficiency. Many organizations are seeking radical changes in the work environment to make it more comfortable and appealing for employees.

Training and development. Every organization should develop their employees' skills by providing training and learning programs. These programs must be planned carefully to get higher returns to the organizations, reduce the employees' stress level and increase their satisfaction.

Job security. It helps the employees be satisfied also decrease the levels of stress and the intention to leave.

Participation in decision-making. Participation is a process that allows the employees to share their ideas and tasks with their superior managerial level. Encouraging the employees in decision making helps in creating trust and a sense of commitment and loyalty.

Social life. It indicates the free time an employee can have to spend on personal activities. The stress of work can reflect on the employee's personal life, for that reason it is important for organizations to make balance between work and life of the employees. The released social life can favourably reflect on employee's performance.

The impact of digital transformation on the quality of work life

To the best of the researcher's knowledge, few researches addressed the impact of digital transformation on the quality of work life in the public service sector. But there is some other effect of digital transformation on work life, in general, such as the research of Rintala and Suolanen (2005). It aimed to monitor the reality of digital transformation in journalistic professions. The research concluded that the quality of the programs had decreased, at least during the early phases of digitalization. The research of Vijay and Soundarapandian (2022) focused on the balance between work life and technology transformation, it shows that remote work is considered as the most important factor that has great positive effect on work life.

Goswami and Upadhyay (2019) and Winasis et al. (2020) focused on the impact of digital transformation on employee engagement through COVID-19 pandemic, both of them confirmed that digital transformation aspects were the best predictor of employee engagement. Guzmán-Ortiz et al. (2020) analyzed the effect of digital transformation on job performance. In 2020, [Almotref's] research aimed to monitor the reality of digital transformation in educational institutions, especially in light of global crises.

In his research Ahmed (2020) aimed to formulate some procedures with the contributions of new technology in achieving quality of work life. The research applied on the faculty member and explained how modern technology contributes to achieving standards related to the economic dimension, the social dimension, and the educational dimension, depending on the functions of University and the tasks of the faculty member there. The research of Pietrafesa et al. (2019) aimed to improve the performance of employees and organizations in relation to ongoing changes and challenges. The

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research analyzed the critical factors related to the use of digital tools in the workplace, examine their impact on work life in terms of health, safety and to find appropriate prevention and protection measures.

According to the literature review, the researches agreed on the importance of digital transformation and its positive impact on organizations, also agreed on the importance of the quality of work life, but differed in the factors that affect the quality of working life. In addition, the previous studies were applied on different fields such as the educational institutions, financial institutions, and journalism.

This research differs from others in terms of the objective, which focuses on assessing the current situation of digital transformation and its role in improving the quality of work life in the public sector, as well as identifying the most important factors that can help in improving the quality of work life.

Problem statement

To the best of the researcher's knowledge, few researches that addressed the impact of digital transformation on the quality of work life in the public service sector. This research also differs in the field of application as it has been applied on Egyptian public sector institutions, in general, and on the Egyptian Electricity Holding Company, in particular.

The core question of this research is: To what extent does digital transformation affect improving the quality of work life with an application on the Egyptian Electricity Holding Company?

Research importance

This research deals with an important issue which is the role of digital transformation in improving the quality of work life. In addition, this research is important to the academics who are interested in studying the quality of work life in the public sector. Additionally, this research presents the results to the officials in the Egyptian Electricity Holding Company and provides them with some recommendations to help them in the decision-making process.

Research methodology

Research design

The design of this research has both a descriptive part which is found in the theoretical part and a quantitative part which is found in the applied study. Theoretically, the research adopted the analytical approach to define the main concepts of digital transformation and quality of work life and its factors. In addition, it applied study to investigate the correlations between the digital transformation and improving the quality of work life. In order to accomplish the objectives of the applied study, the researcher set out the following hypotheses

The main hypothesis of this research is:

 H1: There is a significant positive relationship between digital transformation and improving quality of work life.

The sub-hypotheses are:

H2: There is a significant positive relationship between the digital transformation and compensation and rewards.

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H3: There is a significant positive relationship between the digital transformation and safe and healthy working conditions.

H4: There is a significant positive relationship between the digital transformation and organizational climate.

H5: There is a significant positive relationship between the digital transformation and training and development.

H6: There is a significant positive relationship between the digital transformation and job security.

H7: There is a significant positive relationship between the digital transformation and the participation in decision-making process.
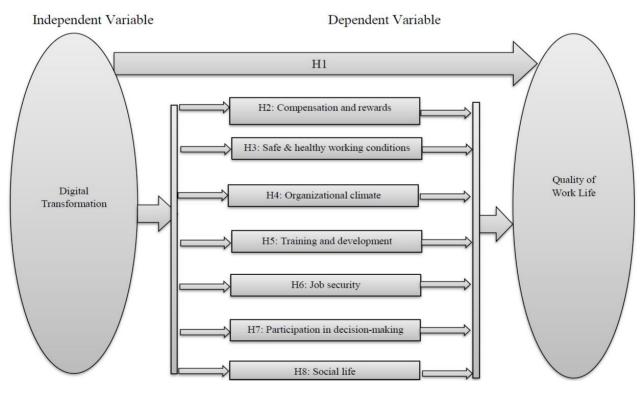
H8: There is a significant positive relationship between the digital transformation and social life.

Research variables

The following figure (1) illustrates the dependent and independent variables:

Figure 1.

Dependent and independent variables

Source: Prepared by the authors.

The indicators are created using statistical technique to combine a group of related statements in one indicator where these indicators are composed by using equal weights method. That is each indicator is calculated by adding the scores of statements which are related to this indicator, and then the sum is divided by the number of related statements. These created indicators will be explained in the statistical part to answer the previously stated hypotheses.

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Population and sample

The population for the research consists of the employees of the Egyptian Electricity Holding Company (EEHC), an Egyptian joint-stock company. The company is considered one of the key elements of sustainable development in Egypt; it exerts significant effort to meet the requirements of the country. It pays great attention to the latest global change in technology as it seeks to be an active player in the digital transformation system.

For that reason, EEHC formed a digital transformation unit, which works hard to improve all levels of services, and digitalizes most of its activities, which helps in reaching a large number of customers easier and faster. in addition, the digital transformation unit applied some smart applications such as: the electronic mobile application, the unified platform for smart electricity services, and the electronic customer service centers.

The members of this unit received the suitable training courses to enhance their competencies to contribute positively in achieving the goals of company. The survey was distributed among 250 of the e at the EEHC during January, 2023.

The sample size

The sample size assuming infinite population is determined according to the following formula.

$$n_0 = \frac{z_{\alpha/2}^2 * p * (1-p)}{e^2}$$

Where Z_α is the critical value of the Normal distribution at α (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), and p is the percentage of specific phenomena and set to be 0.5 as it gives the highest value for sample size, e is the margin error set to be 0.065 (this an acceptable margin of error for the researcher). Then the sample size is 228 persons. To avoid non-response rate, some 250 questionnaires were collected, and 246 were valid ones, the response rate was 98%. The rationale for using equal weights is that there is not any evidence that the questions have different weights.

Data analysis techniques

Firstly, the indicators are composed by using equal weights method. In this research nine indicators are calculated. Secondly, the reliability of the questionnaire is checked using Alpha-Cronbach and validity using average item correlation. Also, descriptive statistics are used such that qualitative variables are described using tables and graphs. The quantitative variables are described using mean, standard deviation, minimum and maximum. For answering hypothesis, simple regression models will be used.

Created indicators and reliability check

There are nine indicators in this research that represent the research variables. The internal consistency coefficient (Cronbach's Alpha) reflects the reliability of a scale, as it captures the proportion of total variance that is common to all items that form the scale, which presumably corresponds to the underlying construct being measured. Items are the questions that measure these indicators.

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Average inter-item correlation is a way of analyzing internal consistency reliability. It is a measure of individual questions on a test or questionnaire give consistent, appropriate results; different items that are meant to measure the same general construct or idea are checked to see if they give similar scores. It must be greater than 0.5, which is shown in the following Table (1).

Table 1.

Created variables of the study and their reliability

Variable	Number of Questions measure the variable	Cronbach's Alpha	Average item correlation
Digital Transformation	7	0.928	0.649
Compensation and Rewards	4	0.917	0.733
Safe & healthy Working Condition	3	0.952	0.869
Organizational Climate	4	0.875	0.635
Training and development	4	0.923	0.749
job security	4	0.931	0.773
Participation in decision-making	4	0.986	0.946
Social life	4	0.937	0.787
Quality of work life	Average of the above 7 indicators	0.931	0.767

Source: Prepared by the authors.

From the previous table, it is clear that the questionnaire is reliable as the Cronbach's alpha and average inter-item correlation coefficient for all items are greater than 0.6.

Respondent's demographic characteristics

Table (2) provides some descriptive statistics of the sample to give a general view of the demographic and professional characteristics of the respondents.

Table 2.

Respondent's demographic characteristics

Demographic Variable	Category	Frequency	(%)
Gender	Female	72	29.3
	Male	174	70.7
Age	Less than 30	48	19.5
	From 30 – 40 years	108	43.9
	From 41 – 50 years	66	26.8
	More than 50 years	24	9.8
Educational level	High school	42	17.1
	University	126	51.2
	Postgraduate qualification	78	31.7
Work experience	Less than 5 years	42	17.1
	From 5 – 10 years	102	41.5
	From 10 – 15 years	78	31.7
	More than 15 years	24	9.8
Designation status	Top level management	66	26.8
	Middle or low-level management	180	73.2

Source: Prepared by the authors.

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As represented in Table (2), out of the total respondents, 70.7% are male and 29% are female. Moreover, it is clear that 20% of the sample aged less than 30 years, 44% of the sample aged 30–40, and 27% of the sample aged 41–50, and only 10% aged more than 50 years. When it comes to the educational qualification, 17% of the sample hold high school certificate, 51% of the sample hold a university degree, while 32% hold postgraduate degrees. Work experience shows that the experience of 17% of the sample is less than 5 years, 42% their work experience is 5–10 years, and 32% work for 10–15 years, while 10% work for more than 15 years. The designation status has 27% of the sample in top managerial level and 73% in middle or low managerial level.

Descriptive statistics of variables of the study

In this section, the descriptive statistics of the variables of the study are described. Table (3) consists of minimum, maximum, mean, and standard deviation, and coefficient of variation. This research use Likert scale from 1–5, as 1: indicates strongly disagree, 5: indicates strongly agree.

From the above table, we can conclude that the average of all variables are around 3 and 4 which means that the respondents tend to neutrally agree and agree to most of the statements that measure these variables. The variable with the highest agreement is the digital transformation, while the variable with the least agreement is the participation in decision-making. Also, the homogeneous variable (the variable with the least variation) is digital transformation with coefficient of variation = 14.8%, while the variable with the highest variability is participation in decision-making with coefficient of variation = 36.3%.

Table 3.

Descriptive statistics of the variables of the study

	N	Minimum	Maximum	Mean	Std. Deviation	C.V
Descriptive statistics						
Digital transformation	246	1.86	5.00	3.96	0.59	14.8%
Compensation and rewards	246	1.00	5.00	3.80	0.78	20.4%
Safe and healthy working condition	246	1.33	5.00	3.89	0.77	19.7%
Organizational climate	246	2.00	5.00	3.83	0.67	17.5%
Training and development	246	2.00	5.00	3.74	0.78	20.8%
job security	246	2.00	5.00	3.79	0.69	18.3%
Participation in decision-making	246	1.00	5.00	3.24	1.18	36.3%
Social life	246	1.00	5.00	3.34	0.93	27.8%
Quality of work life	246	1.48	5.00	3.66	0.76	20.7%

Source: Prepared by the authors.

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Correlation analysis

The correlation analysis between the variables of the study is presented in Table (4).

Table 4.

Correlation analysis

				Correlations				
	Compensation & rewards	Safe & healthy working conditions	Organizational climate	Training & development	job security	Participation in decision-making	Social life	Quality of work life
Digital Transformation	.744**	.632**	.726**	.726**	.700**	.688**	.703**	.768**

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

Source: Prepared by the authors.

As presented in Table (4), it is clear that there is a positive strong (as all coefficients are positive and greater than 0.6) significant correlation between digital transformation and each of compensation and rewards, safe and healthy working conditions, organizational climate, training and development, job security, participation in decision making, social life and the quality of work life and this is with confident 95%, as the p-value associated with them is less than 5%.

Answering the research hypothesis

Multivariate regression models are used to assess the independent variable against the dependent variables. The following are the seven models that will be estimated. Each indicator is calculated by adding the scores of statements which are related to this indicator, and then the sum is divided by the number of related statements. These created indicators are used to answer the previously stated hypotheses.

Answering hypotheses

Compensation & rewards	Safe & healthy working conditions	Organizational climate	Training & development	job security	Participation in decision-making	Social life

$$Compensation\ and\ Rewards\ =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

$$Safe\ \&\ healthy\ Working\ Condition =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

$$Organizational\ Climate =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

$$Training\ and\ development =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

$$job\ security =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

$$Participation\ in\ decision-making =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

$$Social\ life =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

$$Quality\ of\ work\ life =\ \beta_0 + \beta_1 * digital\ transformation + \varepsilon$$

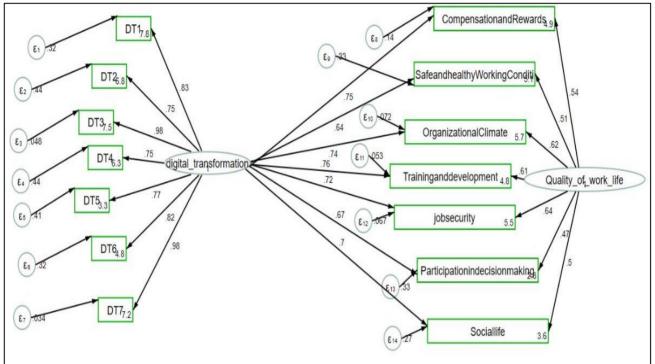Where

β_0 : is the constant term
β_i : is the regression coefficient for independent variable I
ε: is the regression residual term

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The results of the multivariate regression of the sub dimensions of the quality of work life

The following Figure (2) and Table (6) present the results of multivariate regression of the sub dimensions of the quality of work life.

Figure 2.

The results of multivariate regression of the sub dimensions of the quality of work life

Source: Prepared by the researcher.

Table 6.

The results of multivariate regression of the sub dimensions of the quality of work life

Dependent variable	Independent variable			
		Coef.	P>z	R-square
Compensation and rewards	Digital transformation	0.754678	0.000	0.553
	Constant	4.911453	0.000	
Safe and healthy working conditions	Digital transformation	0.639616	0.000	0.399
	Constant	5.079673	0.000	
Organizational climate	Digital transformation	0.740543	0.000	0.527
	Constant	5.711452	0.000	
Training and development	Digital transformation	0.760585	0.000	0.527
	Constant	4.823632	0.000	
Job security	Digital transformation	0.719357	0.000	0.491
	Constant	5.463367	0.000	
Participation in decision-making	Digital transformation	0.672858	0.000	0.473
	Constant	2.761857	0.000	
Social life	Digital transformation	0.695549	0.000	0.494
	Constant	3.598882	0.000	

Source: Prepared by the authors.

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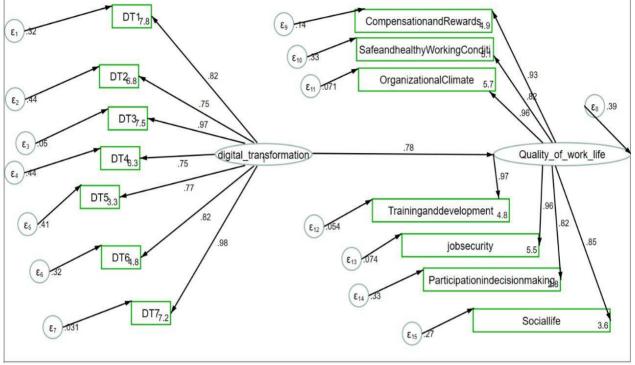Empirical Case Study of the Egyptian Electricity Holding Company

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As presented in Figure (2) and Table (6), we can conclude that:

1- Digital transformation has significant positive impact on **compensation and rewards** and this impact = 0.755 approximately, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 55.3% of the variation in compensation and rewards.

2- Digital transformation has a significant positive impact on **safe and healthy working conditions** and this impact = 0.640 approximately, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 39.9% of the variation, i.e. safe and healthy working.

3- Digital transformation has a significant positive impact on **organizational climate** and this impact = 0.741 approximately, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 52.7% of the variation in the organizational climate.

4- Digital transformation has a significant positive impact on **training and development** and this impact = 0.761 approximately, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 52.7% of the variation in training and development.

5- Digital transformation has a significant positive impact on **job security** and this impact = 0.719 approximately, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 49.1% of the variation in the job security.

6- Digital transformation has a significant positive impact on **participation in decision-making** and this impact = 0.673 approximately, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 47.3% of the variation in the job security.

7- Digital transformation has a significant positive impact on **social life** and this impact = 0.696 approximately, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 49.4% of the variation ie social life.

The following Figure (3) shows the results of multivariate regression of the quality of the overall work life.

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Figure 3.

The results of multivariate regression of the quality of the overall work life

Source: Prepared by the authors.

Table 7.

The results of multivariate regression of the quality of the overall work life

Dependent Variable	Independent variable		
		Coef.	P>z	R-square
Quality of work life	Digital transformation	0.7778	0.000	0.587
	Constant	6.784	0.000	

Source: Prepared by the authors.

As presented in Figure (3) and Table (7) on the results of multivariate regression of the quality of the overall work life, we can conclude that:

Digital transformation has a significant positive impact on the quality of work life and this impact = 0.78, and significant with confidence of 95% as the p-value associated with it is less than 5%. From the value of the R-square, digital transformation explains around 58.7% of the variation, i.e. social life.

Conclusion and results

In conclusion, the primary objective of this research is to investigate the role of digital transformation in improving the quality of work life in the public sector in general and evaluate the current situation in the Egyptian Electricity Holding Company (EEHC) in particular, and finding the most important factors of the quality of work life that are affected by digital transformation.

The results of the surveys indicate that there is a significant positive relationship between digital transformation and the quality of work life, which accepts the main hypothesis of the research.

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Answering the research sub-hypotheses, the result of the research analysis accepts that there is a significant positive relationship between digital transformation and:

1- Compensation and rewards
2- Safe and healthy working conditions
3- Organizational climate
4- Training and development
5- Job security
6- Participation in the decision-making process, and
7- Social life.

The research has reached a number of important results that can be used to improve the quality of work life in the public sector, in general, and in the Egyptian Electricity Holding Company, in particular. The following points summarize the results of this research:

- Digital transformation helps employees do their jobs in the best way; they have more time to focus on the important work.

- Applying digital transformation methods helps managers keep employees involved in the decision-making process; this can improve employees' performance.

- By adopting digital transformation, employees feel that they are more involved in the work.
- The results of this research concluded that the highest significant positive impact of digital transformation is on compensation and rewards. Therefore, it is the main factor of the quality of work life that is affected by digital transformation. That is to say that in order to improve quality of work life we have to focus on compensation and rewards.
- The least significant positive impact is the participation in the decision-making process.

Recommendations

The research provides some recommendations to the Egyptian Electricity Holding Company (EEHC) to improve the quality of work life through digital transformation. The recommendations can be beneficial for the leaders and officials in the private sector, as well.

- To focus on its employee's welfare; they should set attractive compensation policies.
- To adopt satisfying motivators that can be using new methods such as appreciation of their work, and develop a sense of collaboration.
- To create a career growth path and opportunity through providing sufficient training programs.
- To avail the employees more opportunities to participate in the decision-making process with their ideas.
- To design training programs periodically for employees to enhance their knowledge and skills on all new updates in their field of work.
- To mobilize a satisfied and motivated workforce with the ability to create and innovate.
- To give more consideration to the employee's psychological status; this makes him/her more competent for creation and creativity.

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Appendix
Questionnaire

First: Demographic data

Gender	Male	
	Female	
Age	Less than 30	
	From 30 - 40 years	
	From 41- 50 years	
	More than 50 years	
Educational Level	High school graduate	
	University graduate	
	Postgraduate qualification	
Work Experience	Less than 5 years	
	From 5 - 10 years	
	From 10 - 15 years	
	More than 15 years	
Designation Status	Top managerial level	
	Middle or low managerial level	

Second: Digital transformation

No	Sentence	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The company supports digital transformation programs					
2	The company provides guidance to customers and employees to spread the culture of digital transformation					
3	The company has a strategy to ensure the privacy and quality of data and information					
4	The company has the ability to respond to subsequent technological changes					
5	The company has qualified human resources to work in the field of technology programs					
	The digital transformation included most of the company's activities					
	Digital transformation allowed the employees to do their work in the best way					

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Third: Quality of work life

No	Sentence	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1- Compensation and Rewards						
1	There is a clear and announced wage policy					
2	There is fairness in the distribution of wages					
3	The reward system based on accurate performance appraisal					
4	The reward system encourages innovation and excellence					
2- Safe and healthy Working Conditions						
5	The organization provides occupational safe and healthy requirements for employees					
6	The prevention equipment is continuously checked					
7	The management is keen to follow workers' safety and prevention procedures					
3- Organizational Climate						
8	Employees are treated fairly					
9	Eliminating the routine procedures to save employees' time and effort					
10	Employees are encouraged to demonstrate their skills and abilities					
11	Employees are encouraged to use digital programs to complete their work					
4- Training and development						
12	There are training programs for staff development					
13	The promotion decisions are made in a fair manner					
14	The recruitment and promotion system do not need mediation					
15	There are future opportunities for promotion and career advancement in the organization.					
5- Job security						
16	Employees feel stable and do not suffer any threat					

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17	Employees are satisfied with their work					
18	Organization does not suffer any financial problems					
19	The employees have no desire to look for another job opportunity					
6- Participation in decision-making						
20	I can share my opinion in solving the organizational problems					
21	I have the opportunity to present new ideas					
22	My managers encourage me to participate in decision-making					
23	Using electronic software helps me in the decision-making					
7- Social life						
24	There is coordination and cooperation between employees in various departments.					
25	I can contact my colleagues in other departments through digital programs.					
26	I feel like an important part of my team.					
27	There are good relationships with co-workers.					

دور التحول الرقمي في تحسين جودة حياة العمل:
دراسة حالة تطبيقية على الشركة القابضة لكهرباء مصر

المستخلص

أصبح التحول الرقمي في الآونة الأخيرة أحد التحديات المهمة التي يمكن أن تواجه جميع المؤسسات الحكومية. فقد شهد القطاع الحكومي في مصر تحولًا رقميًا كبيرًا، ساعد المؤسسات الحكومية على تحسين جودة الخدمات، وزيادة جودة حياة العمل، التي أصبحت قضية أساسية يجب أخذها في الاعتبار. لهذا، فإن الهدف الرئيس من هذا البحث هو التوصل إلى طرق جديدة لتحسين جودة حياة العمل في القطاع العام –بشكل عام– وتقييم الوضع الحالي في الشركة القابضة لكهرباء مصر –بشكل خاص– من خلال التحقق من دور التحول الرقمي في تحسين جوده حياة العمل. وقد طُبِّقَت الدراسة على الشركة القابضة لكهرباء مصر؛ لكونها أحد العناصر المهمة للتنمية المستدامة في مصر، بالإضافة إلى أن الشركة تولي اهتمًاما كبيرًا بمواكبة أحدث المستجدات العالمية في مجال التكنولوجيا. هذا وقد اعتمد البحث على المنهج الوصفي التحليلي والمنهج الكمي في تحليل الاستبيانات التي طُبِّقَت على عينة مكونة من 250 عاملًا من العاملين بالشركة القابضة لكهرباء مصر. وكانت أهم نتائج البحث هي وجود علاقة قوية ذات دلالة إيجابية بين التحول الرقمي وجودة حياة العمل، كما أوضحت النتائج أيضًا أن التأثير الإيجابي الأعلى للتحول الرقمي كان على العامل الخاص بالتعويض والمكافآت، الذي يُعَدُّ من أهم عوامل جودة حياة العمل. ويقدم هذا البحث بعض التوصيات للمسؤولين بالشركة القابضة لكهرباء مصر للتعرف على أفضل عوامل جودة حياة العمل، وبالتالي الإسهام في عملية اتخاذ القرار.

الكلمات الدالة: التحول الرقمي، الحكومة الإلكترونية، جودة حياة العمل، القطاع العام، المؤسسات الحكومية