

DIGITAL TRANSFORMATION IN DEVELOPING COUNTRIES: EMPLOYEE PERSPECTIVE OF THE PUBLIC SECTOR

AFNAN ALRFOOH

Department of Management Information Systems, School of Business, Mutah University, Jordan.
Email: afnan.ahmad@mutah.edu.jo

ALI ALJAAFREH

Wentworth Institute of Higher Education, NSW, Australia. Email: ali.aljaafreh@win.edu.au.

YEHIA IBRAHIM ALZOUBI

Department of Management Information Systems, American University of the Middle East, Kuwait.

Abstract

In recent years, digital transformation has emerged as a phenomenon that contributes to the transition from the industrial age to the age of smart and connected things. Which had a significant impact on organizations and society. This research aims to identify the factors affecting digital transformation in Jordanian government institutions from the point of view of workers in the Greater Amman Municipality. The research model consists of the Technology Use - Regulation - Environment (TOE) framework, Diffusion Innovation Theory (DOI). Two factors were also added to the research model (self-efficacy and perceived risk of Covid -19). The search was conducted in the Greater Amman Municipality, where (413) questionnaires were returned, 365 of which were accepted for analysis. The Statistical Package for Social Sciences (SPSS) was used to identify and explain the main determinants that affect digital transformation. The results showed that the factors “comparative advantages, IT infrastructure, organizational culture, senior management support, staff development and training” had a significant positive impact on DT. The results also indicated that the factors “compatibility, self-efficacy, and perceived risk of Covid-19” did not have a significant impact on digital transformation. Accordingly, the researcher presented a number of recommendations to decision makers that would positively affect and increase digital transformation in the Greater Amman Municipality.

Keywords: Digital transformation, Greater Amman Municipality, TOE framework, COVID-19.

1. INTRODUCTION

The rapid spread of information and communication technology systems has expanded the global use of the internet and increased the possibilities of the existence of internet-based organizations. Governments are employing information and communication technology as a means to improve their interaction with citizens by providing them with real-time, quickly, accurate information, and many electronic services over the internet (Majdalawi et al., 2015). Ultimately, this will lead policy makers and governments to double their efforts for enhancing the spread of e-government and digital transformation within the government institution. Digital transformation has changed in recent years as a phenomenon that ushers in a transition from the industrial age to an era of connected and intelligent things, with significant ramifications for organizations and society. This transition not only alters how people work, but also how they think, and it emphasizes the need to create new methods to combine physical and digital technology, as well as inter-organizational alliances, to help the company succeed

(Durão et al., 2019). In addition, digital transformation is now a reality, not only for organizations, but for society as a whole, and thus has become an interdisciplinary research topic, given its cross-cutting nature: human resources, marketing, business processes, and innovation (Vial, 2019). The current study attempts to identify the factors affecting the digital transformation of the Jordanian government, specifically the Greater Amman Municipality. However, upon reviewing the previous literature, few or no studies examined the TOE framework in the public sector, and in Jordan in particular. This study focuses on bridging the gap by developing a unified model by combining innovation diffusion theory and the TOE framework. In addition to the perceived risks of Covid-19 and self-efficacy as variables and measuring their impact on digital transformation. The perceived risks of Covid-19 have been examined by a few studies both locally and internationally (Aljaafreh, 2020) and this study will help in understanding the factors affecting digital transformation in Jordanian government institutions, specifically the Greater Amman Municipality. The theoretical field is the second gap in this research. Therefore, the current study represents a new research model the current study developed a unified model by combining innovation diffusion theory with the TOE framework. In addition, the importance of the current study also stems from the investigation of these factors along with the risks of Covid-19 infection and self-efficacy that could play a vital role in Jordan's digital transformation. In conclusion, this study sought to answer the following questions: What are the factors that affect digital transformation in the Jordanian government (specifically from employee Perspective of the Greater Amman Municipality)?

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Grater Amman Municipality

The Greater Amman Municipality started in early 2018 with a 3-year timetable for the e-transformation project and ended with the launch of many electronic services that would save time and effort for citizens, including renewal of professions licenses, traffic offenses... etc. (Moayad Abu Sobeih, 2021b). The Ministry of Digital Economy and Entrepreneurship stated that "Amman Municipality is the first institution in the Jordanian state to adopt an electronic signature with the QR Code feature by adopting the minutes of committee sessions and approving the sessions of the Secretariat Council." On the other hand, the Greater Amman Municipality directed a large media campaign to direct citizens to use the website to obtain services and follow up their transactions electronically, in order to facilitate and reduce the burden on citizens (almamlaka, 2021).

According to a UN survey, Oman ranks 47th in the world's top 100 towns on the index of local electronic services, and fourth in the Arab world behind Dubai, Riyadh, and Tunisia (Moayad Abu Sobeih, 2021a).

2.2 Digital Transformation

The number of devices connected to the Internet of Things worldwide is rapidly increasing, with approximately 8.4 billion devices in use today and hundreds of billions of devices expected in the future. By 2030, more than 5 billion people will be connected to the Internet,

according to estimates by the Cisco Visual Networking Index, which means that the current stage of digital transformation is more difficult than before. As a result, digital transformation requires the use of the Internet of Things to make organizations more aware, predictable and resilient in their operations, features that will enable them to innovate more quickly and achieve the desired results from their work (Al-Bar, 2021). People are beginning to come up with new ways to use business technologies as a result of the advancement of digital technology, rather than only doing it quicker. This was when the idea of digital transformation started to take shape. With new technologies, new things - and new ways to do them are suddenly possible. Digital transformation has become a big phenomenon in the business world in recent years. This is believed to be the next Industrial Revolution in scale, impact and opportunity. The phenomenon of digital transformation is a broader and multi-level method, and what distinguishes it is that it is fast and includes all works. What defines successful digital transformation is that it is not just a technical problem, but a culture, talent development and a stable strategy for the future (Danailova, 2019). One of the most important factors determining the future of their people will be how smart countries are at managing and operating governments, infrastructure, and personnel. Country leaders aspire to improve competencies, reduce corruption, and implement new services with speed and accuracy. There is enormous potential in the world to build effective, competitive and sustainable societies through digital transformation, which will achieve a radical change in the services of citizens in the fields of education, tourism, health, economy, financial banking, retail trade and manufacturing industries, and improve working methods in many organizations, such as gas and oil. The digital transformation has also contributed to improving citizen orientation and productivity. Which means creating new job opportunities, which affects economic growth through creativity and innovation (Al-Bar, 2021).

2.3 Technological Factors

The technology context describes internal and external technologies and new technologies relevant to the company. Technologies may include both equipment and processes. The organizational context refers to the characteristics and resources of the company, including the size of the company, the links between employees, the degree of centralization, human resources, and the administrative structure. In addition, the environmental context refers to the size and structure of the industry, the company's competitors, the macroeconomic context, and the organizational environment. The TOE framework is used extensively in information technology and business. The TOE framework is a far more effective and appropriate analytical tool for explaining how innovation gets adopted in an organization (Tornatzk and & Fleischer, 1990). Shows that the TOE framework has gained empirical validity across a wide range of firm sizes and has served as the foundation for many ICT adoption inquiries, especially those involving EDI and inter-organizational information systems (Awa & Ojiabo, 2016). Although it is used in a variety of different contexts. The concept of TOE has been widely used in the field of e-government, especially in the adoption of e-government (Alqahtani, 2016; Pudjianto, 2009).

DOI Theory

DOI is a firm-level hypothesis that explains how, why, and when new ideas and technology move across cultures. Inventions are transmitted over specialized networks over time and within a certain social system, according to the DOI hypothesis (Rogers et al., 1983). Individuals' preparedness to embrace innovations varies, therefore the percentage of the population who adopts a new technology is usually found to be approximately evenly distributed across time (Rogers et al., 1983). This philosophy's principle is an endeavor to understand when and how people accept or oppose creativity and inventions. This hypothesis tests people's reactions to changes in their surroundings in order to determine how long it takes for an invention to become commonplace. Because of the theory's widespread acceptance, many researchers have adopted it and applied it to their research in attempt to determine the elements that influence organizations' and people' decisions to utilize or not use inventors (Vandykgibson, 2017). There are many studies related to digital transformation, e-government and the adoption of new technology in general that adopted the theory DOI as a framework for the study (Carter & Bélanger, 2005; Sharma et al., 2014). With reference to the previous literature, there are many studies that have adopted the theory of diffusion of innovation and the TOE framework together, to study the factors that affect the adoption, spread and innovation of technology (Abdalla, 2012).

Relative Advantages

Relative advantage is defined as “the degree to which an innovation is perceived as being better than the idea it replaces” (Rogers et al., 1983). The definition of relative advantage is “the measure of the degree to which a procedure provides greater benefit than its predecessor”. The belief that the new system and new technology has benefits that go beyond the current system and technology currently used in the organization (Chen & Hung, 2010). This concept helps companies determine whether customers will choose to use that product or stick to a competing product that already exists. In addition, by looking at studies that dealt with factors affecting digital transformation, the (Van Dyk & Van Belle, 2019) showed that “relative advantage” is the second most important factor in adopting digital transformation. Also, many studies have adopted the DOI theory and relative advantage has taken on an important variable in the adoption of technology and e-government (Alateyah et al., 2013; Erskine et al., 2019; Sang et al., 2009). However, in Jordan, a literature review process was unable to find any study that examined the impact of relative advantages on digital transformation by employees.

Compatibility

Compatibility is defined as “the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters” (Rogers et al., 1983). Task Compatibility is the alignment between a user's task and a leading business intelligence system. There will be a performance effect if the employee's duties and the system functions are not aligned. However, the logic behind this is that if task compatibility is high, the user will use the method, resulting in high user satisfaction, and vice versa (Gaardboe et al., 2017). Compatibility can be less effective when a technology project is discontinued, when it is a

change from a traditional business, when production systems change, or when the value or supply chain changes develop (Aljowaidi, 2015). Many studies have adopted Compatibility as an important factor in adopting technology and adopting e-government (Aljaafreh et al., 2015; Awa & Ojiabo, 2016; Lin & Lin, 2008). However, in Jordan, a literature review process was unable to find any study that examined the effect of Compatibility on of digital transformation by employees.

Self-Efficacy

Self-efficacy is defined as “a belief in one’s abilities to organize and implement the courses of action required to manage potential situations” (Pajares, 1996). Self-efficacy beliefs define how people feel, think, motivate themselves, and behave. Studies have also indicated that there is an important association between Self-efficacy, creativity at work, and the solution of many complex problems and tasks (Redifer et al., 2020). In addition to problem Solving, creativity, and innovation the degree to which you think you can solve the problem and successfully fix your problems within the department you work in and the degree to which you are happy with working and proposing new and innovative ideas for the organization (Wood & Locke, 1987). Self-efficacy positively supports excellence in work, as a study (Flammer, 1997) showed that individuals who have great Self-efficacy are more people in achieving the goals required of them and more for people of creativity and innovators in the field of work through the application of their knowledge. Many studies have adopted Self-efficacy as an important variable in the adoption of technology and innovation in the organization and its role in adopting many new inventions (Westhuizen & Goyayi, 2020). A study (Al-Haderi, 2013) found that self-efficacy has a significant positive effect on the behavioral intention to use information technology. However, in Jordan, a literature review process was unable to find any study that examined the effect of Self-efficacy on of digital transformation by employees.

IT Infrastructure

IT Infrastructure is defined as "a common it resource consisting of a technological physical database of hardware, software, communications technology, data and core applications, and a human component of skills, expertise, competencies, responsibilities, principles, standards and information that combine to build it services that are usually unique to an organization" (Byrd & Turner, 2000). In today's organizations, information technology IT Infrastructure plays an important role. IT Infrastructure requires both technological and human components such as management and development, the IT Infrastructure architecture must be compatible and scalable as it affects the business value of the organizations it. The main component of information systems practices is the information technology infrastructure. They are the main information systems that build, process, store and produce information inside and outside the organization with unprocessed data (Mohammad, 2015). Moreover, many studies have considered that infrastructure is the most influential factor in the adoption of technology in general, government, electronic and digital transformation (Abdalla, 2012; Pudjianto, 2009). Employees nowadays link to the network using a variety of gadgets such as computers, phones, and tablets. As a result, the IT technology must be operational 24 hours a day, with sufficient power to accommodate a larger number of users. However, in Jordan, a literature review

process was unable to find any study that examined the effect of IT Infrastructure on of digital transformation by employees.

2.4 Organizational Factors

Top Management Support

Top Management Support is defined as "Top management support is defined as managerial beliefs and support for initiatives and participation in IT adoption and diffusion within the organization" (Chatterjee et al., 2013). Research on technology adoption based on the TOE framework has also indicated that support from top management has a significant and positive impact on the relationship to the regulatory decision to adopt innovative technology (Low & Chen, 2011). Where top management support lacks an important strength for the organization to conduct specific behavior (Blass et al., 2014). Top Management Support must be committed to providing organizations with every necessary resource and harnessing their capabilities to facilitate innovation and service if Top Management Support is not present, technology adoption and digital transformation will be weak. When this support is low, there will be increased technology adoption and digital transformation (Madanyake, 2014). A study in Jordan found that the top administrations in Jordanian universities should pay more attention to enhancing the provision of services through university websites, which will lead to an improvement in the communication experience between universities and students (Alshamayleh et al., 2015). Thus, many studies have found that organizations with stronger support from the top management for innovative new technology are more likely to embrace technology, e-government (Abed, 2020; Pudjianto et al., 2011) However, in Jordan, a literature review process was unable to find any study that examined the effect of Top Management Support on of digital transformation by employees.

Employee Development and Training

Personnel development and training is defined as "members of an organization obtain and apply the skills, abilities, and attitudes needed by that organization, resulting in an increase in the employee's knowledge and skills to do a specific job (Andoh et al., 2016) where the main assets in every company are the employees. As a result, they must be trained for optimum job competency through effective training and equipping them with new skills and knowledge Training and development is used to bridge the gap between current results and expected future performance Where training and growth are part of the human resource development function (Weil & Woodall, 2005) Due to changes in organization and design, technical training has become increasingly important. Employees also need to master a variety of tasks and increase knowledge (problem-solving techniques, teamwork and quality circles) about how their organizations operate. Training is generally designed to improve employees' professional skills, whether they are technical, managerial, or personal. Employees may be trained to operate machines, teach them new skills, or learn techniques for personal growth and development (Degraft-otoo, 2012). Hence, several studies have pointed to employee knowledge development as an important variable for technology adoption because of its significant impact (Omar Ali, 2018). However, in Jordan, the literature review process was unable to find any

study that examined the impact of employee development and training on digital transformation by employees.

2.5 Environmental Factors

Organization Culture

Organization culture is defined as “Organizational culture is the shared understanding of beliefs, values, standards and philosophies of how things work” (Woinshet Taye, 2013). He also saw (Belias & Koustelios, 2003) that culture determines the relationship between employees and the institution, company or service in which they work. In organizational terms, culture can be defined as: “A system of shared values and beliefs that produce standards of behavior and establish an organizational way of life (Koberg & Chusmir, 1987). Several studies have found that a strong organization culture is characterized by highly professional employees and managers who improve Perform, become more professional, be more skilled and innovative (Tedla, 2016; Woinshet Taye, 2013) “With digital transformation, it is imperative to create a culture where everyone understands the technology and where the risks lie” (Nancy Albinson, 2019) says this message to employees constantly. Culture with the strategy of working to enhance the organization’s ability to increase productivity, accelerate performance and outperform competitors, especially in this digital age, many studies have relied on the organization’s culture as an important factor in adopting technology and adopting e-government (Abdalla, 2012), and on the other hand, With proper attention to organizational culture and successful use of technology, organizations that possess an organizational culture can achieve a successful digital transformation, a study (Jonathan, 2020) also found that where The study found that the culture of the organization has a positive impact on the implementation of digital transformation in the context of public organizations.

Perceived risk COVID-19

Perceived Risk COVID-19 perceived risk is defined as "The possibility of infection infected with epidemic diseases at an unspecified time"(Hasan et al., 2017). The world has faced challenges since late December 2019 after the novel coronavirus (COVID-19) was first detect in Wuhan, China. It became an epidemic as the number of infected people exploded (Gössling et al., 2020). During and after the PRC outbreak, information management systems will have a significant impact (Barnes, 2020) Meanwhile, information technology is critical in reducing the impact of PRS on people's life. For example, using social media to communicate with those who work in health care (Golinelli et al., 2020). Many higher education institutions have used digital technologies not only to resume the incomplete semester but also to conduct quarterly exams, and other services (Longhurst et al., 2020). As a result, the world has directed a digital transformation in various sectors and at all levels, more than ever before. However, in Jordan, a literature review process was unable to find any study that examined the effect of PRC on of digital transformation by employees.

3. THE RESEARCH MODEL

Based on the above discussion, the following research model is proposed (Figure 1).

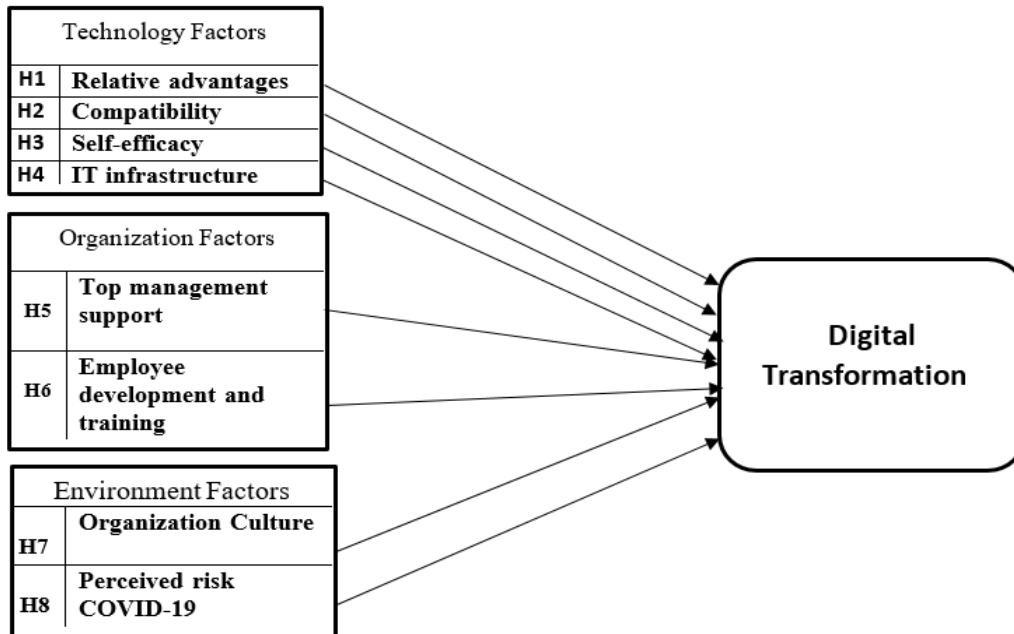


Figure 1. Research Model

3.1 Hypotheses

- H1:** *There is statistically significant effect of Relative advantages on digital transformation in The Greater Amman Municipality*
- H2:** *There is statistically significant effect of Compatibility on digital transformation in The Greater Amman Municipality*
- H3:** *There is statistically significant effect of Self-efficacy on digital transformation in The Greater Amman Municipality*
- H4:** *There is statistically significant effect of IT infrastructure on digital transformation in The Greater Amman Municipality*
- H5:** *There is statistically significant effect of Top management support on digital transformation in The Greater Amman Municipality*
- H6:** *There is statistically significant effect of Employee development and training on digital transformation in The Greater Amman Municipality*
- H7:** *There is statistically significant effect of organization culture on digital transformation in The Greater Amman Municipality*
- H8:** *There is statistically significant effect of Perceived Risk COVID -19 on digital transformation in The Greater Amman Municipality*

4. METHODOLOGY

4.1 Instruments

A survey method was adopted to collect experimental and actual data for this study. The study population is all employees of the Greater Amman Municipality, and their number is 24 thousand employees (Moayad Abu Sobeih, 2021).

The Municipality of Amman was chosen over the rest of the government institutions because it is one of the most institutions in the country that implements e-government programs and has many automated services.

The study sample (413 employees) was chosen using a multistage sampling technique and a calculator form (Sample Size Calculator <https://www.surveysystem.com/sscalc.htm>). The researcher distributed the questionnaire to the employees to achieve the objectives of the research.

The data collection process took one month. The first stage was a simple random sampling method for selecting municipal branches in which questionnaires would be distributed. The second stage adopted the appropriate sampling method with employees from the selected branches.

Questionnaires were distributed using self-management technique and online technology. The total number of questionnaires collected was 413. After the review process, (48) questionnaires were excluded for not filling them out correctly. Finally, 365 questionnaires were analyzed, consisting of 76.7% males and 23.3% females. A validated online questionnaire has been designed by (6) academics and field research experts.

A questionnaire was distributed over one-month period. The research survey consists of two parts: a) Demographic information (gender, educational qualification, professional experience, and career title).

The model variables including (relative advantages, compatibility, self-efficacy, it infrastructure, top management support, employee development and training, organization culture, perceived risk COVID-19, digital transformation). The questionnaire used a 5-point Likert scale ranging from agree (1) to strongly disagree (5) to measure the sample perceptions of research variables.

4.2 The Study Sample

4.3 In Table 1, the frequencies and percentages for the study's demographic variables is shown.

Table 1: Sample Description

		<i>Frequency</i>	<i>Percent</i>
<i>Gender</i>	Male	280	76.7
	Female	85	23.3
<i>Qualification</i>	Secondary	97	26.6
	Diploma	69	18.9
	Bachelor's	146	40.0
	Postgraduate	53	14.5
<i>Professional Experience</i>	less than 5 years	100	27.4
	5 to 10 years	57	15.6
	11 to 15 years old	62	17.0
	16 to 20 years old	70	19.2
	Over 20 years old	76	20.8
<i>Career title</i>	leading	91	24.9
	Supervisor	156	42.7
	Support	118	32.4
	Total	365	100.0

5. RESULTS

5.1 The Reliability of the Study Instrument:

Reliability indicates the ability of the research tool to present the same results if it is applied several times with a marginal error that does not exceed (5%). The Cronbach alpha coefficient was used to measure the study's reliability. Table 2 shows Cronbach alpha, where all the study variables are acceptable since they are more than (0.70).

Table 2: Reliability Cronbach's alpha coefficients values

<i>Variable</i>	<i>Description</i>	<i>Cronbach's alpha</i>
<i>Independent</i>	Relative advantages	0.87
	Compatibility	0.81
	Self-efficacy	0.88
	IT infrastructure	0.83
	Top management support	0.87
	Employee development and training	0.74
	Organization culture	0.87
	Perceived risk COVID-19	0.87
<i>Dependent</i>	Digital Transformation	0.87

5.2 Research Findings

The study's major question is "What are the factors that affect digital transformation in the Jordanian government (specifically from employee Perspective of the Greater Amman Municipality)?" To answer the study question, the employees' responses were collected using

a survey method (questionnaire). Table 3 summarizes the results of the analysis using the statistical tool SPSS version 23 to determine the standard deviations and calculate the means.

As shown by the table, all the means calculated for the study variables are with a high degree. Particularly, the 4.03 was ranked in the first place, with a mean of (4.03) and a standard deviation of (.514), while the factor of Organization culture was in the last rank with a mean (3.84) and a standard deviation of (.632).

Table 3: Means and the standard deviations

<i>Factor</i>	<i>Mean</i>	<i>Sed</i>	<i>Category</i>
<i>Relative advantages</i>	4.03	.514	High
<i>Compatibility</i>	3.89	.627	High
<i>Self-efficacy</i>	4.01	.547	High
<i>IT infrastructure</i>	3.84	.630	High
<i>Top management support</i>	3.90	.639	High
<i>Employee development and training</i>	3.87	.566	High
<i>Organization culture</i>	3.84	.632	High
<i>Perceived risk COVID-19</i>	4.01	.631	High
<i>Digital transformation</i>	3.89	.576	High

6. TESTING THE STUDY HYPOTHESES

To answer the research question, the researcher conducted several research using the variance inflation factor and the tolerance test to ensure that there is no strong correlation between the independent variables; in particular, the value of the variance inflation factor (VIF) shouldn't exceed (10) (Diamantopoulos & Winklhofer, 2001) and tolerance should exceed the value (0.05). The following table (4) shows the test results. (Cut-offs point less than 10).

Table 4: VIF and Tolerance statistics

<i>Factor</i>	<i>Collinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
<i>Relative advantages</i>	.426	2.347
<i>Compatibility</i>	.275	3.636
<i>Self-efficacy</i>	.473	2.114
<i>IT infrastructure</i>	.373	2.681
<i>Top management support</i>	.362	2.759
<i>Employee development and training</i>	.474	2.108
<i>Organization culture</i>	.300	3.329
<i>Perceived risk COVID-19</i>	.727	1.375

Accordingly, the results in table 4 shows that for the coefficient of variance inflation, all values of the independent variables were less than (10), while for the tolerance test, all values of the independent variables were greater than (0.05). The variance test was also used to evaluate the model hypotheses. The results are shown in Table (5) below.

Table 5: Model Summary

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig</i>
<i>Regression</i>	.799	.639	.631	.350	77.252	8	9.657	78.754	.000
<i>Residual</i>					43.651	365	.123		
<i>Total</i>					120.904	364			

Table (5) shows that R value is (.799) it explains the eight factors that our model proposes (Relative advantages, Compatibility, Self-efficacy, IT infrastructure, Organization culture, perceived risk-covid 19, Top management support, Employee development and training), may account for (R Square= 0.639) of variance concerning Digital transformation. The table also shows that the total regression model is significant as at the level ($\alpha \leq 0.05$) which mean multiple regression indicates significant positive effect between the independent and the dependent variables at the which denotes a significant positive relationship between the independent and dependent variables at the level 0.05. The following table (6) shows the test of multiple regression for the independent variables.

Table 6: Final Results

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>	
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>			
<i>(Constant)</i>	.222	.173		1.287	.199	
<i>Relative advantages</i>	.137	.055	.122	2.503	.013	Accept
<i>Compatibility</i>	.005	.056	.006	.093	.926	Reject
<i>Self-efficacy</i>	-.004	.049	-.004	-.080	.937	Reject
<i>IT infrastructure</i>	.146	.048	.160	3.063	.002	Accept
<i>Top management support</i>	1.38	.048	.153	2.895	.004	Accept
<i>Employee development and training</i>	.222	.047	.217	4.704	.000	Accept
<i>Organization culture</i>	.255	.053	.280	4.813	.000	Accept
<i>Perceived risk COVID-19</i>	.044	.034	.048	1.293	.197	Reject

The results of multiple regression test in the previous table shows that there are five independent variables which have a statistically significant impact on the dependent variable at the level ($\alpha \leq 0.05$). The results also showed that there are three factors have no effect on the dependent variable, in that Compatibility, Self-efficacy and Perceived risk-covid 19. Based on the above results, the variable of Relative advantages is statistically significant at the level ($\alpha = .013$), where the value of Beta was (.122). The variable of IT infrastructure is statistically significant at the level ($\alpha = .002$), where the value of Beta was (.160). The results also revealed that the variables Organization culture and Top management support are statistically significant at the level ($\alpha = .000$) and ($\alpha = .004$) respectively, where the value of Beta was (.280) and (.153) respectively. The results also showed that the variables Employee development and training is statistically significant at the level ($\alpha = .000$), where the value of Beta was (.217). Based on the above results, three null hypothesis was accepted since it states that" H2: There is statistically significant effect of compatibility on digital transformation in The Greater Amman

Municipality", "H3 There is statistically significant effect of Self-efficacy on digital transformation in The Greater Amman Municipality " and "H8 There is statistically significant effect of Perceived risk COVID- 19 on digital transformation in The Greater Amman Municipality " , the alternate hypothesis for the remaining variables, on the other hand, was supported because it stated that " the factors " “relative advantages, It infrastructure, organization culture, Top management support, Employee development and training”.

7. DISCUSSION

The results showed that, there is a significant effect of the relative advantages on digital transformation in GAM at ($\alpha = .013$), and this result indicates that there is a significant effect of (RA) on DT at the level ($\alpha < .05$). The results showed that the relative advantages are positively related to digital transformation and e-government, as the results showed that digital transformation contributed to achieving many benefits for employees by increasing their productivity and improving their job performance. The results of this study confirm that the positive effect of comparative advantages on digital transformation is consistent with the conclusion that there is a positive relationship between relative advantages and digital transformation and e-government the results agreed with many studies in the literature (Sang et al., 2010; Van Dyk & Van Belle, 2019).

Moreover, the compatibility factor (comp) does not have a positive effect on digitization in GAM at ($\alpha = 0.926$). This result is attributed to the fact that digital transformation is incompatible with most aspects of the work in which employees work and current operating practices. As the Greater Amman Municipality is one of the government institutions, and the start of digital transformation is from the government decisions taken by the government and imposed on them. Where employees believe that new technology and digital transformation are among the decisions that are imposed on them and they believe that it does not have a positive impact on their current work. The result of the current study differs with the study (Agarwal & Karahanna, 1998) which found that there is a positive relationship between compatibility and technology adoption.

The results also revealed that the factors of (SE) was not seen as having a positive impact on digital transformation in the Greater Amman Municipality from the point of view of employees, as it came with a rating of ($\alpha = 0.937$). However, the results showed that employees do not have complete confidence in the use and understanding of new technology and applications of digital transformation. Where employees believe they do not have complete confidence in guiding individuals in the use of technology. Also, some respondents suggested that using DT in their work requires self-confidence. The result of the current study differs with the study (Durão et al., 2019) that found that there is a positive effect of self-efficacy on innovative work and technology acceptance.

Information technology infrastructure (ITI) is one of the factors that have a positive impact on digital transformation in the Greater Amman Municipality at the level ($\alpha = .002$), as the results showed that information technology infrastructure is positively related to digital transformation and e-government. For example, if there is weak infrastructure, (software, communication),

digital transformation and e-government development is very difficult and vice versa. The results are consistent with several previous studies (Van Dyk & Van Belle, 2019).

The results the factor Top management support (TOS) of there was a direct effect of on DT in GAM at ($\alpha=.000$). This result indicates that organizations need to follow up and invite top management to innovate and to stimulate digitization and the use of its technologies in the organization. However, support for top management can have a positive or negative impact on digital transformation, as top management must be able to address the risks involved in digital transformation, inform employees, and emphasize the importance of digital transformation. The results of this study confirm that the positive impact of support for top management as there is a positive relationship between support for top management and the adoption of new technology in the organization. The results agreed with many studies in the literature (Hsu et al., 2019).

The results showed that, there is a significant impact of employee development and training on digital transformation in GAM at ($\alpha = .000$), and this result indicates that there is an effect of EDAT on DT. The results showed that training and development have an impact on digital transformation and e-government, as the results showed that the organization conducts many training workshops, which contributed to the development of digital skills among employees and improving job performance. The results of this study confirm that the positive impact of employee development and training on digital transformation is consistent with the result of the study (Amrouni et al., 2019), as there is a positive relationship between employee development and training and the adoption of technology and e-government. The results agreed with many studies in the literature.

The result showed that there is a direct effect of organization culture (OC) on DT in Greater Amman Municipality was important too at ($\alpha=.000$). However, it is culture of the organization can have a positive or negative impact on digital transformation, as having clear values and beliefs for the organization enhances the behavior of workers and their followers of change, creativity, and learning. The results of this study confirm that the positive effect of organization culture is a positive relationship between organization culture and digital. The results agreed with many studies in the literature (Van Dyk & Van Belle, 2019).

Perceived risks - Covid-19 are not seen as factors that have a positive impact on digital transformation in GAM from the point of view of employees ($\alpha = .197$). The results showed that employees are not afraid of contracting the Corona virus while coming to work in the organization, as it is believed that employees are more comfortable with traditional work. However, in Jordan, work on implementing digital transformation in the Greater Amman Municipality began before the pandemic, and it was not a major reason to start the digital transformation of the organization. The result of the current study contrasts with the results of the study (Aljaafreh, 2020) where the positive impact of the perceived risks of Covid-19 on students' continued intention to use e-learning was found.

7.1 Conclusions

Finally, this study aimed to identify the factors affecting digital transformation in the Greater Amman Municipality. The results showed that all factors are acceptable and considered positive effects except for Compatibility, self-efficacy, and Perceived Risk COVID -19. Organizations must know, focus on, and use the factors that significantly affect digital transformation to augment and enhance digital transformation and e-government. Accordingly, the researcher recommends the following:

- The Greater Amman Municipality should pay more attention to the importance of digital transformation by following up on the strategic plan and future vision for digital transformation in the organization.
- The researcher recommends those in charge of the Greater Amman Municipality to provide technical support and follow up on modern technologies to sustain the progress of digital transformation in the organization.
- Based on the results of the study on the impact of self-sufficiency, the researcher recommended the necessity of holding training and awareness workshops for the employees of the Greater Amman Municipality, which helps motivate them to contribute to the digital transformation.
- The Greater Amman Municipality shall appoint new employees on the basis and ability to use computers well and keep abreast of technical and technological developments and work to develop them.
- The researcher recommends benefiting from the experiences of developed countries in digital transformation and holding conferences and training courses to benefit from their successful experiences in digital transformation.

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