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HOW DOES TELEWORK ACT AS A SOLUTION TO THE PUBLIC SECTOR IN THE TIME OF PANDEMIC?

Case
Study

Keywords

Telework;
Telecommuting;
Remote Work;
Telework Practice;
Public Sector;
Jordan;

JEL Classification

H83, J18, J28, J45, J68, J88; Po2; N45

Abstract

As Coronavirus COVID 19 became a global pandemic, and its repercussions have affected the global economy badly, teleworking was being forced as an alternative pioneer to be implemented in the public sector. This study will discuss adapting Telework as a solution in crisis times in developing countries (Jordan). Systematic Literature Review was adopted to explore the challenges and best practices for adopting Telework in the Public Sector, especially during the crisis. Afterward, interviews were conducted with experts, professionals, and academics from Jordan to discuss the best solutions for adapting Telework in the Jordanian Public Sector. This paper has found several challenges facing the adoption of Telework in the public sector, and they were mainly related to Security, Infrastructure, and Technological Illiteracy. Moreover, this paper has also suggested solutions through the interviews. The most prominent solutions focused on finding a legal framework for the Telework, providing appropriate infrastructure and equipment for the employees to work remotely, and offering frequent technical support for the teleworkers to ensure the Data's security and confidentiality. There was a lack of studies related to Telework in the public sector by reviewing the literature, especially in developing countries. This paper will be a reference for other researchers to explore the challenges and the solutions.

INTRODUCTION

The year 2020 brought the Corona Virus COVID 19 to the world. This Virus affected the world's economy, health, and society badly and forced some countries to implement curfew or mandatory quarantine to their citizens. Other countries chose to slow the virus transmission in different ways as they reduced the employees' working hours and implemented strict rules to forcing organizations to have a minimal number of employees in offices at the same time. Coronavirus changed human beings' role from being producers of services and goods to, sometimes, only consumers.

Directly after the spread of this Virus, State governments started to switch and boost the public sector to implement work-from-home policies. In other words, Teleworking (also known as telecommuting, remote work, mobile work) must be implemented. The latest studies also used the term Virtual work as the main term of teleworking (Mihhailova, 2020). In several countries, Teleworking was being introduced to the public sector, but not fully implemented, while in other countries, the public sector was not giving any attention to this way of work.

The private sector was always interested in the competition aspects in which innovation is present. Moreover, cost reduction is one of the main issues which the private sector was focusing on years ago. Teleworking was being introduced as a door supporting the private sector in adopting policies to support remote work to contribute to cost savings and improve productivity and flexibility. From a corporate perspective, Teleworking can also increase recruiting talents and reduce employee turnover. In the time of crisis and recession, most public sector corporations adapt the downsizing to reduce the labor force number. However, Telework has been seen as a solution and a tool, as well as a strategy that leads to an organization's survival (Sturgeon, 1996).

However, what if using Telework has become the only way to perform public sector activities in the Coronavirus infection crisis? More questions will be directed to those obliged to implement Telework on their systems without any preparation. Moreover, this should become a test for the public sector that was introduced to Telework previously, but hesitation was not to implement this way of working in almost all public sector activities.

This paper examines the Jordanian government readiness and procedures towards implementing Telework in the public sector. Moreover, this research explores the literature review and the best practices in this research field and interviews of experts from different sectors to identify the challenges and benefits to propose the best

recommendations to the Jordanian government to adapt the Telework mechanism in its organizations.

Telework

Teleworking is a manifestation of the industry 4.0 Revolution, in which Professor Klaus Schwab, founder, and CEO of the World Economic Forum, described it as fundamentally changing the way we live, work and relate to each other. Teleworking will benefit from "a set of new technologies that integrate the physical, digital and biological worlds, affecting all disciplines, economies and industries, and questioning entrenched ideas about what man means" (Klaus, 2020).

Several studies agreed that Telework was firstly discussed in the 1970s. At that time, the energy crisis boosted the researchers to consider Telework as an alternative to physical work (Gillespie, Richardson, & Conford, 1995). Moreover, the researcher discussed the topic of Telework concerning feminism, in which they have found that it could be a solution that could solve the women's home-work conflict (Christensen, 1987; Olson & Primps, 1984) as we can see that whenever there is a crisis or a conflict, Telework appears to the surface as a solution.

Telework or virtual work was simply defined by A Humala (2017), DeSanctis & Monge (1999) as the way people work from different locations by using remote devices to manage business processes. Telework was also defined by Hoeffling (2001) as the ability of organization vendors, contractors, business partners, and other stakeholders to perform work from locations other than the organization's facilities. More terms related to Telework have also been identified in which Telework teams were used and developed. Telework teams or virtual teams were defined as „members of a cross-road or cross-working team, and they participate in the work to achieve a specific goal, even though they are already separated in place" (Madsen, 2011).

According to the Global Workplace Analytics for Research (Akbari & Hopkins, 2019), the company's Telework strategy saves up to \$ 22,000 annually for every remote employee. Also, it stated that teleworking had increased 140% since 2005. Moreover, Upwork (Dragomir, 2020) has mentioned that 73% of any organization's departments will have remote workers by the coming eight years. Cisco systems international reported in 2009 that due to reducing expenditures for office furniture, general bills, insurance, social security, etc., the company had an annual savings of \$ 277 million in productivity by allowing employees to work remotely. Similarly, Forbes Magazine and Reuters reported that the health care company Aetna which has 14,500 remote

employees out of 35,000, had \$ 78 million in cost savings.

In addition, there are also societal benefits of teleworking, including reducing traffic congestion and the environmental impacts of using transportation and social and cultural benefits from working from a variety of locations around the world and improving preparedness for disasters and emergencies. According to Global Workplace Analytics, 75% of remote workers said they could continue working in disaster situations, compared to 28% of regular employees at corporate headquarters.

The researchers have found many terms related to Telework, such as (Teleworking, telecommuting, remote work, mobile work, Virtual work, and Home-Based Work). However, it has been found that all of these terms are describing the same meaning. Therefore, the researchers adapted the term Telework to this study in which they defined it as performing work remotely using technology from different locations other than the employer facilities.

The Jordanian Case

The Hashemite Kingdom of Jordan is located in the Middle East. Jordan is considered among the relatively small populated countries globally, with an approximate population of 10.5 million (Department Of Statistics, 2020). It is also classified as a country with a middle-income economy. Nonetheless, the lack of natural resources and the large influx of refugees from the neighboring regions have crippled its economic growth (USAID, 2019).

All these factors affected the Jordanian economic growth and increased the public debt to reach 94% of Gross Domestic Product (GDP). Moreover, this also has made the unemployment rate reach 19% at the end of 2019. With all these challenging conditions, currently, the country is facing the Coronavirus COVID19 crisis that started at the beginning of 2020, threatening the country's stability and affecting the economy (Jordanian Central Bank, 2019).

Jordan's central bank governor, Ziad Fariz, mentioned that it was too early to predict the extent of the negative impact on the cash-strapped economy from a nearly month-long lockdown to stem the coronavirus outbreak. Nevertheless, the crisis has resulted in a sharp drop in demand and production, and that the once-thriving tourism sector would require at least a year to recover (Suleiman, 2020).

In addition to this, Jordan has been quicker than most countries in the region to take drastic measures to stem the virus's spread by imposing a tight lockdown that has brought large sectors of the economy to a standstill. To demonstrate, Jordan has stopped all international flights and closed all

border crossings for passenger travel with Syria, Iraq, Israel, and Saudi Arabia and imposed a curfew under draconian emergency laws.

The researchers introduced the importance of studying the Jordanian case to describe the importance of Telework in a country where its economics has suffered from several external economic scenarios. Coronavirus COVID19 pandemic is also another external factor that would affect the Jordanian economy badly. Therefore, Telework would be implemented to mitigate the effect on the public sector and Jordan.

Infrastructure

Dr. Bashar Hawamdeh, Chairman of the Board of Directors of the Production Association, stated that (the infrastructure developed in Jordan can accommodate all the requirements of the work tasks and educational levels). He also stressed that technology is strongly present so that Jordanians have the ability to enforce education and accomplish job tasks from home (Intaj, 2020).

The field of Internet and Communication Technology (ICT) is considered an opportunity for Jordan to increase its competitive advantages over other countries. Jordan has taken very serious steps to launch its major ICT initiatives to develop the ICT sector. ICT in Jordan is one of the most developed sectors in the region. According to Data Portal, the number of mobile connections in Jordan in January 2020 was equivalent to 81% of the total population. Besides, Internet penetration in Jordan stood at 67% in January 2020 (Simon, 2020).

Legal Framework

The Jordanian government has not issued legislation regulating Telework to include legal definitions, types of Telework, legal provisions on rights, duties, and the contractual relationships until the time this research is conducted.

On the other hand, at the beginning of the crisis, the Ministry of Labor has authorized on 16/3/2020 ministers and all other governmental agencies to issue decisions to organize Telework, taking into consideration the security and privacy issues as well as the geographical distribution. In this case, it also managed Teleworking in Public Sector as follows:

- Employees cannot work for any other company during the official working hours.
- Employees perform the work personally and observe the privacy of documents and data, and they cannot turn off their phones during working hours.
- Submit regular reports shows the employee's commitment to work remotely and tasks accomplishment with the deadlines.
- If it requires his presence at any time, employees must exist physically in the workplace (Addustour, 2020).

To conclude, the legal framework of the Jordanian government was too general in its terms. In other words, it was not a specific law to regulate and legislate Telework as an identified way of work that the organizations can perform. Briefly, Telework is still in its beginning phase in Jordan. Without a doubt, Telework was always an optional scenario for governments and organizations since it was established.

METHODOLOGY

Systematic Literature Review was adopted to restrict the existing literature and explore the research trends and best practices for the Public Sector in adapting Telework mechanisms, especially during the crisis. Moreover, in-depth interviews were conducted with experts, academics, and professionals to include what they think and believe about challenges and benefits in adopting Telework in the public sector, taking Jordan as a case study.

In the literature review part, two search engines were used (Scopus and ScienceDirect databases). First, a search was carried out using keywords related to the topic. The keywords were ("Telework") AND ("Public organizations") 248 Scopus 1322 ScienceDirect 1570. As a result of this first search, 1570 articles were found (Scopus 248 and ScienceDirect 1322). Secondly, the keywords have been changed in order to get more related results into ("remote work" or "e-working" or "teleworking") AND ("public sector" or "government" or "state government").

Consequently, 218 articles were found (Scopus 69 and ScienceDirect 149). Third, the results were limited for the last ten years to get the most recent articles. After this step, the number of studies was reduced to 110 studies (45 on Scopus and 65 on ScienceDirect). These results are called candidate Studies. The final step was performed to selecting and filtering the candidate studies based on excluding the book chapters and conferences. Afterward, a comprehensive review of all the candidate studies was performed to choose the studies directly related to the research topic. Finally, after this systematic search, the studies were finalized to 16 studies in which the researchers have analyzed.

LITERATURE REVIEW

The various previous studies were conducted on aspects of Telework cases and characteristics. Few studies were given for the discussion here, which focuses on the Telework adoption by the public sector. Table 1 portrays the topics that were found.

Summary of Literature Review

After studying the research topic's literature, it was clear that the primary concern of studies was that Telework was a luxury option, not the only option that must be implemented. It was also clear that the main challenge in almost all the studies was the security of Data. According to Gordon (2020), the major challenge of using Telework in the public sector is financial data security. Moreover, de Vries, Tummers, & Bekkers (2019) discussed more negative telework effects in the public sector. They pointed out that the isolation and the low organizational commitment were found to perform Telework in the public sector.

Adriani (2019) and Leščevica & Kreituze (2018) explored the benefits of Teleworking in different aspects of their research work. Adriani (2019) studied the impact of Telework adoption in the public sector and its relationship to encourage women to work remotely to participate in economic growth and positively affect the birth rate. Similarly, Leščevica & Kreituze (2018) stated that developing a best practices model to perform Telework in the public sector will help the world focus on economic growth.

To summarize the mentioned challenges in the literature, the researchers categorized them into two levels. The first level is the organizational level, and the second level is considered the employees' level. These levels that the researchers mentioned are mentioned in Table 2.

Studying the challenges and benefits of Telework in the public sector was the main interest of the literature studies. There was no discussion of adapting Telework as the primary way of performing tasks in a pandemic period. Also, all the mentioned studies were conducted in the scenario of the developed countries. It is vital to note the implementation of Telework in developing countries as well. Having the employees in the organization's facilities was considered the norm style of work before 2020. Coronavirus changed the norm and made social distancing the world's primary concern that should be applied socially and formally.

Summary of Interviews

To add value to this research, the researchers have interviewed five Professionals and Academics from Jordan. They contributed with what they believe and think about implementing Telework in Public Sector in Jordan.

The question was open-ended as follows:

The main question: Can Telework implementation be applicable in the Jordanian Public Sector? What are the challenges and benefits of adopting Telework in the Jordanian Public Sector from their perspective?

The results are presented in Table 3.

Legal and Labour Sector

Telework was being set as a must-do option to the Public Sector in the time of the Coronavirus crisis. Suddenly, the public sector employees were forced to stay at home to prevent being infected (Qatamin). However, there are no legislations, considerable laws, or laws in the Public sector to regulate the teleworking processes (Qatamin & Amoush). Qatamin added that capital investment has to be made available to prepare the needed infrastructure. Besides, Amoush mentioned that the current labor law does not state Telework clearly. However, the current Jordanian labor law does not prevent this type of work (AlMahasneh).

IT Sector

Moreover, Alkhawaldeh mentioned that the needed technology and infrastructure exist within the Jordanian public sector organizations. On the other hand, the public sector lacks the required equipment to be delivered to teleworkers to perform tasks remotely (Jabbar & AlKhawaldeh). Besides, Qatamin and Alkhawaldeh agreed that there is a need to train staff to deliver and receive such online services. It is also essential to have means of documenting the online sessions, discussions, and meetings legally to ensure that labor law and by-laws apply (Qatamin).

Women Perspective

Jabbar and Nims mentioned that Telework could not be implemented in all types of work. Besides, Nims Doubted that public sector organizations are considered to be ready to perform Telework. Women can benefit from Telework implementation in the public sector in a way that they can perform tasks from home (Nims). However, home distractions, physical and psychological efforts will be the main obstacle for women Teleworkers. Jabbar added that women would have the opportunity to contribute to dropping the unemployment rate as they can get the advantage of being employed in public sector organizations that are located far from their homes. Children will also be raised to understand the importance of being productive citizens as they will be watching the working mother while performing tasks.

DISCUSSIONS

Several previous studies showed the importance of Telework; however, the private sector was more severe by adopting policies that support this type of work. Still, on the other hand, the public sector was shy in heading towards Telework. Telework faces many challenges and concerns in the public sector. The main concerns were cybersecurity, privacy, Legal recognition, and confidentiality of information. Most of the obstacles Telework faces

in the public sector, and their solutions have been gathered in the table below.

In light of the current crisis that the world is facing today (Coronavirus COVID19), Telework has become necessary for the public sector. Therefore, this paper presents some recommendations to overcome challenges, especially in developing countries such as Jordan. The most prominent solutions that this paper has found from previous studies and interviews with specialists are shown in Table 4.

CONCLUSIONS

The world currently witnessed a new challenge, which is the challenge of the outbreak of coronavirus COVID19. Many researchers have agreed that this crisis will change the world's shape and affect all life aspects.

From the first moments of the outbreak, many countries rushed to take many decisions and procedures to limit and control the Virus's spread among their citizens. All these procedures led to imposing a new reality based on social distance. With this social distance, many problems emerged to the surface, especially in the economic sector, and force people to adapt to this new reality and practice their work considering safety and health measures. Telework is not a result of the current moment, as it started in the beginnings of the technological revolution that the world witnessed in the seventies of the last century. Since then, it is still seen as a luxury and unpleasant choice for employers.

With all the changes that we mentioned earlier due to the Coronavirus COVID19 crisis, remote work has become necessary, and heading towards it is no longer an option. However, despite this remarkable development and the significant trend towards Telework in the private sector, the public sector is still moving slowly and shy to adapt to Telework and is still facing many challenges, especially in developing countries.

This paper found the most prominent challenges facing Telework in Jordan's public sector at two levels, institutions' level and employees' level. At the level of institutions, the paper discovered that, although government institutions have the technological infrastructure to implement Telework, there are many challenges, such as the lack of a legislative framework, weak infrastructure outside the institution, and the lack of government employees' readiness and technological illiteracy. The most prominent challenges included home distractions, infrastructure, face-to-face communication, and work interdependencies on the employees' level.

Finally, the study recommended that the Jordanian government has to take quick measures to make the public sector environment suit working remotely, and most notable recommendations are: creating a detailed legislative framework for remote work, investing in infrastructure outside the institution, supporting the employees to be able to work remotely through the necessary equipment, technical support, and training.

Limitations to this paper were related because it did not take the employees' opinion about Telework, so they get involved in identifying the challenges and the solutions from their point of view. Furthermore, omitting a few factors may influence the study, such as trust, privacy, transparency, and the current IT system. This study is a reference for all researchers who will study Telework in Jordan and in developing countries, and it can be used as a basis for more research in this field.

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LIST OF TABLES

Table 1
Literature review

Author/ year	Title	Main findings
(Gordon, 2020)	Securing workers beyond the perimeter	<p>This study was conducted in the United States / WeWork Company in New York state where the company relies heavily on teleworking, this paper explores the most prominent practices of teleworking.</p> <p>The study found that at least 70% of workers in the knowledge sector work for at least one day per week outside the office, in addition to that the study indicated that the biggest challenge to working remotely in the public and financial sectors is security, as the study recommends updating the technological safety tools for remote workers frequently and to training the workers.</p>
(de Vries, Tummers, & Bekkers, 2019)	The Benefits of Teleworking in the Public Sector: Reality or Rhetoric?	<p>This study conducted in the Netherlands, an email sent to all members of a medium-sized Dutch municipality and use of a daily methodology to follow up on the governmental employees for five consecutive days to explore the effects of teleworking in the public sector.</p> <p>The study found some of negative effects for teleworking that affect government employees such as isolation and low organizational commitment in the days that they work at home, and the study did not find any effects of teleworking in participating in the work, but the study indicated that higher leader-member exchange (LMX) can help to reduce the negative effects of Telework.</p>
(Adriani, 2019)	Teleworking System: A new working system in Japan as a solution to encourage women's participation in economic sectors	<p>This study conducted in Japan / Tokyo on 19 women working remotely to examine whether the new policies adopted by Japan for Telework contribute to encouraging women to participate in the economy.</p> <p>The study found that the new policies for teleworking encourage women to participate more in the economy so that they can keep up with other duties that needs to be done (children, home-work... etc). The study also indicates that this may contribute to the economic growth in Japan in general and may affect the birth rate to be increased and thus positively affects the economy in Japan</p>
(Thulin, Vilhelmson, & Johansson, 2019)	New Telework, time pressure, and time use control in everyday life	<p>This study explores how the conditions of home-based working affect the quality of life and social sustainability of workers in terms of time pressure and control of time use in daily basis.</p> <p>The study conducted on a sample of 456 workers in 6 government agencies in Sweden, the results showed that time pressure is not related to the type of job but is related to other factors related to the family, work out of the official working hours or the use of smartphones. On the other hand for controlling time, the presence of children in the home and the use of smartphones to do work tasks were the most prominent factors related to the low time control.</p>
(Caillier, 2018)	11 Do flexible work schedules reduce turnover in U.S. federal agencies?	<p>This study was conducted in the United States on two government sources Federal Employee Viewpoint Survey and FedScope, to explore if teleworking affects turnover: quit, transfers.</p> <p>The results showed limited support for Social Science Association Agency theory "the agencies that adopt flexible work are more likely to retain employees because the institution makes them feel that the institution is concerned with their well-being." The study found that teleworking reduces quits but found no evidence to reduce the rate of transfers or turnover.</p>

(Leščevica & Kreituze, 2018)	Prospect possibilities of remote work for involvement of Latvian Diaspora'S in economy and businesses of Latvia	This study was conducted in Latvia to discuss the possibility of more participation by citizens living outside Latvia in the economy through teleworking. This study found that involving the citizens outside Latvia through enabling teleworking can contribute and support the economy, moreover, the study explored the best practices in the world and the areas or jobs that can be suitable for remote work, and finally suggested a model for remote work in Latvia
(Khan, Johnson, Premila, & Osmanovic, 2017)	Organizations perception to Telework in Dubai: An emperical investigation	This study was conducted in the UAE, 600 questionnaires were distributed to employees in the public and private sectors working in the technology sector. The results showed a great variation in the adoption of teleworking between the public and private sectors, although the two sectors prefer to work remotely.
(Caillier, 2016)	Do Teleworkers Possess Higher Levels of Public Service Motivation?	A survey conducted in U.S.A / on federal government employees, to examine the relationship between telecommuting and Public Service Motivation (PSM) which is a Borientation to delivering services to people with a purpose to do good for others and society. The results indicate that federal workers who telecommuted frequently (i.e., those teleworking 4 to 5 days a week) reported higher levels of PSM than federal workers who did not telecommute frequently.
(Collins, Hislop, & Cartwright, 2016)	Social support in the workplace between teleworkers, office-based colleagues and supervisors	This study was conducted in the United Kingdom. Interviews were conducted with a traditional office and teleworkers employees to explore the impact of social support relationships. The results showed a great difference between employees in terms of social support, as it showed that the social relationships of teleworkers are complex, and they are able to build relationships, but most of them are from other teleworkers, in contrast, the results showed that social support is more important for workers in offices where they value their relationships with other colleagues in the office.
(Brown, Smith, Arduengo, & Taylor, 2016)	Trusting Telework in the federal government	This study was conducted in the United States where federal managers still do not allow workers to work remotely, and this paper came to explore the most important reasons for this. The results showed that the managers' aversion to working remotely is due to several reasons, the most important of which is the lack of trust. The paper identified some recommendations that contribute to the success of teleworking 1- Organization (top management support, technology & tools, formal policy, results-based performance, management system, culture-based on trust) 2- Manager (supervisor support, managerial training, formal and informal, communication skills, managerial trust) 3- Employee (family support, set work/family boundaries, training, social interaction, employee trust)
(Weinert, Laumer, Maier, & Weitzel, 2016)	IS information technology solely to blame? The influence of work-home conflict dimensions on work exhaustion	This study conducted 542 employee surveys to explore the relationship between IT usage-related and work-based dimensions of (WHC): time-, strain-, and behavior-based WHC. The results show that the IT-based dimension of WHC only indirectly influences work exhaustion, whereas time- and strain-based WHC contributes significantly and directly to work exhaustion.

Source: authors' own editing

Table 2
Telework challenges

Organizational Level	
Legal Framework	Implementing a specific regulation that legislates Telework in the public sector, and identifying legal definitions, types of Telework, legal provisions on rights, duties, and contractual relationships.
IT Infrastructure	Telework requires ICT infrastructure (servers, equipment, tools and technology) to ensure the tasks are being accomplished.
Security concerns (Trust and Privacy)	Telework in the public sector is different than performing it in the private sector. Public sector security and privacy are considered to be the number one priority. Trusting devices that are connected to a governmental network is a challenge.
Employees Level	
Home distractions	It is hard for teleworkers to isolate themselves while being at home, from family duties. They need to adapt to new rituals and systematic behaviors to work from home without distractions (Greer & Payne, 2014).
Infrastructure	Telework needs certain technologies to be preset as well as the ability to secure data from being hacked
Face-to-face communication	-Face to face mentoring is essential in many task cases, but being a work from home will eliminate this ability option (Madsen, 2011) -An obstacle related to the information flow in virtual management levels and team members can negatively impact communication and cooperation (Workman, 2005). -Telework may reduce the quality and amount of communication between colleagues (Gajendran & Harrison, 2007).
Interdependencies of work	The lack of interaction and synergy between team members is a great challenge (Greer & Payne, 2014).
Management/Supervision	When using Telework, the managerial control and supervision is a challenge to the organization (Tremblay, 2002)
Non-teleworker impacts	Kurland and Bailey (1999) theorized that performance monitoring, jealousy, lack of synergy, work coordination, availability, and a home environment that is not conducive to work could threaten the effectiveness of telework practices.
Technology illiteracy	Teleworkers need an advanced level of technical skills and knowledge to perform their tasks remotely, considering the security and privacy of data.

Source: authors' own editing

Table 3
The interviewees' list

Interviewees	Title	Date of the interview	Sector/ Perspective	Gender
Dr. Nidal Qatamin	Former Minister of Labour	15/04/22020	Labour	Male
Dr. Ibrahim Amoush	Former Minister of Justice	16/04/22020	Legal	Male
Dr. Salma Nims	Secretary-General at Jordanian National Commission for Women	16/04/2020	Feminist	Female
Dr. Sinaria Jabbar	Chairperson, Department of Educational Leadership and Foundations, The University of Jordan	16/04/2020	Academic	Female
Dr. Sulaiman AlKhawaldeh	Director, Knowledge Stations, Ministry of Digital Economy and Entrepreneurship	15/04/2020	Technical (IT)	Male
Dr. Medyan AlMahasneh	Assistant Professor, Faculty of Law, Isra University	14/04/2020	Legal	Male

Source: authors' own editing

Table 4
Challenges and solutions

Challenges	Solutions
Organizational Level	
Legal Framework	Formulating a unique legal framework for Telework to control the legal relationship between the public sector and its employees so that the Telework is clearly defined and clarified the rights and duties of employees and all the legal issues related to the nature of the relationship such as (work hours, nature of work, reports ... etc.).
IT Infrastructure	Develop the technological infrastructure to apply Telework. The public sector can use the currently available technology means such as social media and open-source applications for the current situation.
Security concerns (Trust and Privacy)	Some countries have used new technological means to deal with privacy and information security concerns to develop trust and privacy. One of the leading technology used is the blockchain. This technology has proven safety, privacy, and trust and can be relied on in the public sector. Nowadays, many countries use it in the public sector, such as (Estonia, UAE, and others).
Technological Illiteracy	Developing training for the public sector employees can be done via the Internet on a unique website for this purpose. The Jordanian government launched several websites since the beginning of the crisis to deal with particular issues such as (information about the cases,) and the government can launch a website or mobile applications (as more than 88% of Jordanians have a mobile phone) targeting government employees to train them on Technology use and other related issues such as information security and privacy.
Management/Supervision	The nature of Telework differs from traditional work, the conventional supervision must be changed to suit the Telework, and that can be done by setting other mechanisms for following-up workers based on the achievement and task accomplishment also by submitting periodic reports about the status of the tasks. The Technological communication methods can be used to follow up and control the employees and conduct frequent online meetings between the employees and the officials.
Employees Level	
Home distractions	For this problem, some researchers suggested that employees take Telework more seriously to allocate the right place and time to work. The worker can spend some time in areas far from dispersion (such as a coffee shop, restaurant, or library). But, in pandemic periods, teleworkers must choose a reliable environment to perform their tasks away from distractions.
Infrastructure	The government investment in the employee's infrastructure may consider an additional cost for the institutions in the short term. Still, the implementation of Telework will provide benefits and financial savings to the institutions on the long run. Therefore the governmental institutions must provide the appropriate infrastructure for the employee to perform their work remotely by supporting them with proper equipment and devices and follow-up frequently by an IT team to maintain and ensure the confidentiality and security of the information.

Face-to-face communication and Interdependencies of work	This is one of the problems that widely discussed in the literature. There were many solutions to this problem. One of the leading solutions was using the new technology means and social platforms that provide employees with the ability to communicate directly with other colleagues and coordinate to accomplish their tasks. The public sector can also adopt some applications that offer the ability to communicate more and build virtual teams to interact and perform coherently.
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Source: authors' own editing