Exploring factors that effect on transformation towards Digital Government: Evidence from Kuwait

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Abstract

The research explores the various socio-economic technological factors that impact the digital government initiatives in Kuwait. The research further examines how the historical cyber literacy levels will influence the design and sustainability of future technological initiatives. Moreover, this paper looks into the current obstacles in human resources, technological repositions and regulatory challenges. The existing research has used the mono method for conducting this research in which an online survey has been the instrument for collecting data. 120 participants from Kuwait's government have been taken for conducting the survey. The data has been analyzed through graphical and statistical analysis based on 10 close-ended questions. The research has found that Kuwait's digital government is using digital government initiatives, and the people respond to digital services. However, there is a challenge to employees' limited knowledge of e-government strategies for which intervention of training is required. Along with that, the government should have citizen-centric focus. It could be concluded that Kuwaiti government should hire technological experts who could provide training to employees and make them excellent in digital initiatives. In addition, it has been understood that future research in this topic would be taken by collecting qualitative sources of data rather than quantitative sources of data to increase in-depth data collection .

Key words: Transformation, Digital, Government, Kuwait

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استكشاف العوامل المؤثرة في التحول نحو الحكومة الرقمية: أدلة من الكويت

ملخص

يتناول البحث العوامل التكنولوجية و الاجتماعية والاقتصادية المختلفة التي تؤثر على مبادرات الحكومة الرقمية في الكويت. ويبحث البحث كذلك في كيفية تأثير مستويات محو الأمية السيبرانية التاريخية على تصميم واستدامة المبادرات التكنولوجية المستقبلية. وعلاوة على ذلك، يبحث هذا البحث في العقبات الحالية في الموارد البشرية، وإعادة التموضع التكنولوجي والتحديات التنظيمية. وقد استخدم البحث الحالي طريقة أحادية لإجراء هذا البحث حيث كان الاستبيان عبر الإنترنت هو الأداة لجمع البيانات. وقد تم اختيار 120 مشاركًا من موظفي القطاع الحكومي في الكويت لإجراء الاستبيان. وتم تحليل البيانات من خلال التحليل البياني والإحصائي بناءً على 10 أسئلة مغلقة. وقد وجد البحث أن الحكومة الرقمية في الكويت تستخدم مبادرات الحكومة الرقمية وأن الناس يستجيبون للخدمات الرقمية. ومع ذلك، هناك تحدٍ يتمثل في المعرفة المحدودة للموظفين باستراتيجيات الحكومة الإلكترونية والتي تتطلب تدخل التدريب. إلى جانب ذلك، يجب أن تركز الحكومة على المواطن. ويمكن الاستنتاج أن القطاع الحكومي يجب أن يوظف خبراء تكنولوجيين يمكنهم تقديم التدريب للموظفين وجعل لديهم القدره على التعاطي مع المبادرات الرقمية. وبالإضافة إلى ذلك، فقد أصبح مفهوما أن البحوث المستقبلية في هذا الموضوع سوف تعتمد على جمع مصادر البيانات النوعية بدلا من مصادر البيانات الكمية لزيادة جمع البيانات المتعمقة.

الكلمات المفتاحية: التحول، الرقمي، الحكومة، الكويت

1. INTRODUCTION

Public administration has become irrevocably intertwined with advances in information and communication technologies. According to Baheer, Lamas and Sousa (2020), the ascendancy of e-government has led to a spurt in efficiency in citizen delivery services. Digital government encompasses the deployment of technologies that streamline government operations, consequently increasing trust in the state's organs (Clarke, 2020). Kuwait, a budding financial power, has integrated digital identity systems to ensure openness and transparency in internal workings. The efficacious implementation of digital government depends on the levels of cyber literacy of Kuwait's population (Doran et al., 2023). The introduction is followed by the Literature review and the methodology parts where theoretical perspectives and the data collection and analytical parts are laid. It is followed by the results where the online questionnaire responses will be evaluated, followed by the discussion, final recommendations, and limitations of the research.

Efficient digital services prevent leakages in economic growth, enhancing transparency and accountability. As per Liva et al. (2020), open data initiatives in digital governments would enhance trust in government sovereign organs. Additionally, greater participation rates might be achieved by bridging the chasm between elitist policymaking of the top echelons of the government with the population in suburban and rural areas as shown by Wilson and Mergel (2022). The research will shed light on the unique challenging circumstances related to the paucity of adequate investments in the Middle East. The systematic evolution of digital transformation in Kuwait has become imperative for sustaining its ambitions as a regional superpower (Tangi et al., 2021). The research rationale lies in

understanding how efficiency and transparency will help the government sectors imbibe digital transformation. However, generalization regarding the analysis of the digital divide will miss having a nuanced understanding.

Digital government initiatives are hindered by the lack of socio-cultural nuances in existing studies, and the dismal state of technological readiness has led to an unsustainable digital government framework. An overarching investigation for the systematic plugging of the challenges in government policies and technological infrastructure complexity is needed.

The paper aims to conduct an overarching exploration and evaluation of various factors that impact the development, strategy, and success indicators of the digital government indices of the Kuwaiti government. The research seeks to conduct a vigorous academic interpolation of the existing academic interpretation of digital initiatives in the Kuwaiti context and offer incisive recommendations as well as existing research limitations to policy practitioners.

2. LITERATURE REVIEW

The literature review focuses on the already existing studies and their evaluation to understand the aspect of digital government in Kuwait. The digital government and its utilization will be discussed along with the focus on the theoretical frameworks. It will highlight the challenges related to adopting digital government and how those challenges could be solved. Further, It will highlight the literature gap in the reviewed literature studies to understand the importance of the current ongoing research.

2.2 HISTORICAL EVOLUTION AND KEY COMPONENTS OF DIGITAL GOVERNMENT IN KUWAIT

The digitalisation of government services and activities in Kuwait has many historical initiatives which need to be understood. As per Alenizi (2021), in the 2000s, Kuwait started efforts to digitalise its processes of government by having a focus on increasing accessibility and efficiency. For this, basic online services were established that allowed citizens to have information and submit their required forms through electronic devices. In 2006, the Kuwait national e-government program was launched which helped in improving the country's digital transformation journey. This program provided a unified framework for services of digital government that emphasized citizen-centric solutions and enhanced administrative processes. Online services in portals have become very important in Kuwait since 2010 as stated by Yıldırım and Bostancı (2021). The Kuwaiti government started its digital government services and introduced online portals for different government agencies and ministries. These citizens were able to access official documents and complete transactions along with communicating with government entities by using these digital platforms. In addition to this, in 2024, Kuwait started the "Smart Kuwait 2035 vision" which is a strategic initiative that outlines the commitment of the country to improve digital government initiatives (Arab Times Online, 2024). According to this vision, the main emphasis is on the integration of developing technology such as data analytics and artificial intelligence to improve the delivery of services and administrative procedures.

The main components of digital government in Kuwait are e-service portals, National information network data, security measures, mobile applications and integration of emerging

technologies. Kuwait is establishing e-service portals through which citizens and businesses could have a centralized platform to get access to a wide range of services from the government including education and healthcare. Kuwait has started a "national information network" which has helped in fostering efficient and secure communication between different government entities. Moreover, to enhance accessibility mobile applications started in Kuwait that help it to access government services on their smartphones as stated by Hou et al. (2020). Using these applications has provided user-friendly interfaces and real-time information to the citizens to enhance their experience. As the importance of data in digital government is increasing, data security measures are also given attention by Kuwait which includes encryption protocols and continuous monitoring. In addition, technology such as machine learning and blockchain are also being leveraged by Kuwait's digital government to enhance their decision-making and automate processes. In 2023, Kuwait also implemented training programs and public awareness campaigns to educate businesses and citizens about the use of digital services. On the contrary, Alfa et al. (2021) have argued that there are certain gaps in technology infrastructure which led to issues such as slow processing timings and system failures. From this statement, it could be understood that although Kuwait has developed its digital government it still needs proper infrastructure to increase the effectiveness of digital services. Countering this, it could be said that over-reliance on technology might cause challenges such as downtime of system and technical glitches but it could be solved by proper training of people.

2.3 THEORETICAL FRAMEWORK

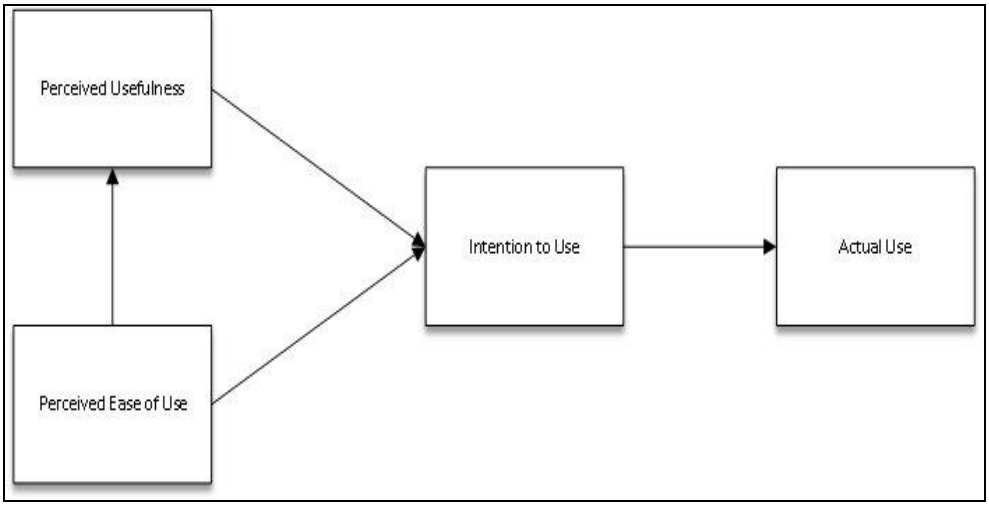


FIGURE 2.1: TECHNOLOGY ACCEPTANCE MODEL

(Source: Kamal et al. 2020)

The Technology Acceptance Model (TAM) is a suitable theory in the context of the digital government perspective in Kuwait. Kamal et al. (2020) have opined in the study that as per this theory, the acceptance of users related to technology will be understood by two factors: perceived ease of use and perceived usefulness. In the context of Kuwait, applying a technology acceptance model could be useful in understanding how it is perceived to be implementing online platforms and the effectiveness of these platforms in accessing services from the government. For example, the Technology Acceptance Model explores the attitude of citizens toward the e-government platform examines factors such as accessibility and user interface and also focuses on the convenience of online transactions as per the statements of Ali and Anwar (2021). Citizens perceive e-platforms as extremely helpful to use and

help facilitate services in transactions with government agencies. Therefore, it helps to understand that these citizens have a higher likelihood for adoption and acceptance of digital services in the Kuwaiti government. On the contrary, if the citizens perceive challenges or difficulties they will not see what this platform is used for and the government will have to address the challenges for wider acceptance of digital services.

2.4 Success Factors and Challenges

Strong leadership attributes mark the apex of optimal managerial support for the allocation of resources for digital government initiatives. According to Scholl (2021), the setting of an innovative culture is essential in securing data centres and maintaining good internet connectivity. While friendly platforms suggest reliable cybersecurity practices for the Kuwait government, the internal legal and regulatory frameworks will further have to promote citizen participation rates. However as opined by Janssen et al. (2021), Human resources have to be trained using international consultants, and this will propel digital literacy rates of key government functionaries leading to the percolation of critical skills across the administrative hierarchy (Qian, 2020). The operational capabilities of digital government initiatives should be checked for optimal capability in terms of data storage as well as the presence of reliable broadband connectivity imbued with strong firewall support.

Inclusionary practices of the citizens will help in the determination of the future user-friendliness of the cyber platforms (Eom and Lee, 2022). However, the diverse needs of the non-tech-savvy populations need to be accounted for using

multiple channels of media and universal education to increase awareness. Collaboration with international digital literacy organizations mainly about culturally aligned Islamic nations will gauge the levels of existing credibility of the Kuwait government with digital initiatives as shown by Reyes et al. (2021). Resource sharing should be done among government sectors to ensure that collective challenges are overcome through perpetual training capabilities (Madyatmadja and Prabowo, 2016). Adaptability to evolving technologies, mainly in automation and AI-powered data analysis, should be guaranteed for the top talent manning critical digital infrastructure in the Kuwaiti government.

Change resistance is pervasive in the Kuwait government sector due to the misalignment between traditional organizational structures and the need for productivity, and higher rates of digital adaptations. According to Sanina et al. (2023), the stakeholders are further perpetuating the digital divide due to the vested interests that are creating constricted accessibility behaviour for ensuring digital literacy initiatives. The Kuwaiti government is making targeted efforts to bring the leaning psyche towards new highs of international standards. However, due to the decreased quality of education levels in government schools and offices, the inoperability of digital initiatives has become constricted (Marino and Pariso, 2021). Due to the lack of robust cybersecurity awareness, there is a need for standardized measures to be called in from the top echelons of Middle Eastern cyber cooperation agreements. The absence of open-source solutions to the new developing challenges in digital government initiatives has led to questions about the

long-term sustainability of the actions taken. According to Liva et al. (2020), the data silos are further imbued with the need for sophisticated inter-agency coordination capabilities. The emergence of regulatory challenges from neutral international organizations has led to privacy and security concerns (Lindtren and Veenstra, 2018). The stringent regulations are taking time to develop roots in the government offices since the new technology adoption is highly complex, and this leads to the leaving of technologically marginalized groups from the central periphery.

2.5 User Adoption and Citizen Engagement

According to the Technology Acceptance Model, user adoption could be explored for creating extensions into the multivariate intentions of the citizenry in using government services. According to Reyes and Garcia (2014), the penetration of user-friendly interfaces will depend on the extent to which the perceived utility of the digital government initiatives is evaluated. The interactional simplicity and the probability of the users enhancing the security of the services will further create reliable drivers of law-abiding citizens. However, as opined by Huang and Karduck (2017), the establishment of secure personal data frameworks will be proportional to the quality of the training programs. The overcoming of obstacles will depend on the government employees and the private sector staff to overcome their unfamiliarity with technology (Holgersson and Karlsson, 2014). Furthermore, the role of societal attitudes and their inclination to leverage the technological knowledge frameworks will determine the success of digital government services.

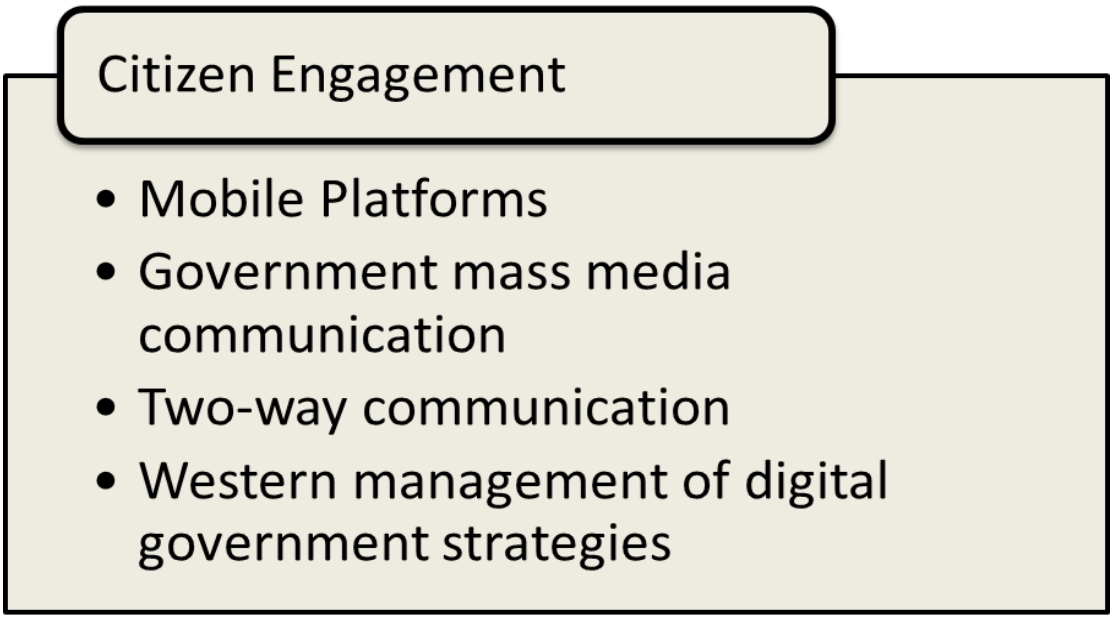


Figure 2.2: Ways of citizen engagement

(Source: Self-developed)

Citizen engagement should be enhanced by leveraging mobile platforms. Frequent use of government mass media communication is useful in the positive deliberations of the public and can lead to policy feedback that will further facilitate informed discussions as showcased by Barcevicius et al. (2019). Interactive platforms with two-way communication capabilities will further elevate the quality of decision-making processes. According to Misuaraca et al. (2019), the incorporation of open government data initiative mechanisms will help in the flow of transparency and lead to the active participation of knowledge and semi-skilled workers. The co-creation of citizen collaborative tendencies with the government technology frameworks will enhance the relevancy of digital services. However as shown by Shin, Ho and Pak (2020), inclusivity has a high premium in the gender-unequal society of

Kuwait. With the absence of a significant portion of women in the workforce, the extent to which the masculine structure of Kuwaiti society imbibes technological prowess will remain to be seen (Umbach and Tkalec, 2022). Furthermore, the recent theoretical frameworks related to Western management of digital government strategies might further refine the body of knowledge in Kuwait. Digital skills in Kuwait universities may receive an upward impetus through the dissemination of government policies in the optimal utilization of e-governance initiatives (Li and Ding, 2020). The adoption of government-citizen services like e-tax filing, industrial permit applications, and basic citizen services related to law enforcement and national security are still in a dormant stage in Kuwait and require the bureaucratic machinery to disseminate sufficiently safeguarded related to cybersecurity awareness.

Current literature on digital government initiatives lacks contextual specificity about Kuwait. The broad economic landscape and the social-cultural differences are not given the required research depth (Aslan and Ercanli, 2020. Future analytical studies should be able to dissect the efficaciousness of the current digital government initiatives and the obstacles in the implementation part need to be studied. Current literature gives confined insights into the adequacy and the levels of scalability of the digital infrastructure and opportunities in Kuwait. There is an underexploration of the citizen engagement dynamics and a detailed examination of the user-centricity of the platforms is required. Documentation of the experiences for measurement of the intergovernmental dynamics between the democratically elected government technological initiatives and the royal centres of power needs to be done. The rate of acceptance and the utilization factor of the current digital initiatives need to be researched further to ensure that future

development of technological expertise will be in alignment with the desired objectives of the Kuwaiti government.

Thus, the literature review has reviewed the various success drivers and the incidental challenges revolving around the digital government in Kuwait. The discourse has provided the dynamics of user adoption and citizen engagement has been elevated with the various technology acceptance frameworks. Theoretical analyses examined the crucial determinants of citizen acceptance of the various interactive governance models and the alignment of government policies with internally accepted best practices. The literature also focused on the contextual-specific analysis related to the unique socio-technological circumstances. The literature also analyzed the knowledge gap in the shortcomings of various research studies to offer an accurate glimpse into the cultural dynamics and people-to-government interaction.

3. METHODOLOGY

The methodology focuses on the tools and methods used in the research. It will highlight the research philosophy, approach strategy choice and time horizon for the intended research. Moreover, this methodology will highlight the data collection procedure and the data analysis method through which the results of the research have been framed.

3.1 RESEARCH PHILOSOPHY

Research philosophy is extremely important for understanding the philosophical direction of the research. This research has employed the positivism philosophy which helps in analyzing the quantitative results of the research. As per Younus and Zaidan (2022), the positivism philosophy helps in

understanding the quantitative analysis of the factual data which helps in increasing the efficiency of the research. Positivism philosophy has helped this research in evaluating the survey results of the Kuwaiti government faculties to understand the importance of digital government in Kuwait. Positivism philosophy has helped in evaluating the experiences of workers in the Kuwaiti government to understand the situation of digitalisation in Kuwait's government. Thus, it is an appropriate strategy for the current research.

3.2 RESEARCH APPROACH

The research approach is extremely important for conducting research as it helps in understanding the ways through which data would be analyzed. The existing research has used a deductive approach that has helped the researcher deduce conclusions from the survey results and the responses of the government officials of Kuwait. The deductive approach helps in retrieving an understanding of the research topic from existing theoretical frameworks and also from the current thinking and evaluation of research participants (Casula et al. 2021). Therefore, using the deductive approach for this research has been extremely beneficial.

3.3 RESEARCH STRATEGY

There are many research strategies that are used in a paper such as experimental research, ground theory research, case study research or action research. This research used the action research strategy by collecting a survey of government officials in Kuwait. The action research strategy has helped this research to highlight the opinions of government officials of Kuwait regarding digitalisation in their activities. The action research strategy is used by researchers to know about the first-hand experience of people regarding the research topic (Clark et al. 2020). The action research strategy has been helpful for this research due to its subjective nature.

3.4 RESEARCH CHOICE

First, conducting research should focus on selecting the research choice of methods. This research has utilized the mono method using the quantitative research strategy by conducting the survey. Using the mono method this researcher only used a quantitative source of data which is the survey collected by the government officials in Kuwait. The quantitative analysis of collected data has helped this research in understanding the exact situation of digital government activities in Kuwait and how much the employees need to work on their digitalisation knowledge and practices.

3.5 TIME HORIZON

It is extremely important to set the time horizon for collecting data in research. This electric time horizon for this research is a cross-sectional time horizon which focuses on data collection at a specific point in time. As per Lee et al. (2021), the cross-sectional time horizon helps in saving time and resources while conducting research. A cross-sectional time horizon has helped this research in knowing the exact situation of Kuwaiti government officials in dealing with the digitalisation of its practices in the current period. On the other hand, a longitudinal time horizon would have focused on the different periods and their impacts on the digitalisation of Kuwait's government. However, it would not have been appropriate for the limited time of the research.

3.6 DATA COLLECTION AND PARTICIPANTS

The collection of data in research is substantial as without having appropriate data it is not possible to conduct research. This research has used the primary quantitative method for collecting data using the survey strategy. 120 government officials of Kuwait have been selected as participants in this research to understand the aspect of digital government in Kuwait. Surveys help in understanding the collective opinion of a huge variety of participants which helps in increasing the variability and relevance of the research (Sammut et al. 2021). The research participants were at first contacted for their approval of the research process. The participants were sent the online questionnaire through emails to collect the survey responses. Participants have sent their responses through their respective emails.

3.7 DATA ANALYSIS

The collection of data might only be complemented by the process of data analysis. This research has focused on graphical and statistical data analysis. In this research, 10 graphs have been generated by forming 10 research questions. Graphical analysis helps to gather quantitative results (Al-Ababneh, 2020). These graphs have been used for analyzing the results related to digitalisation in Kuwait's government and its current situation. Graphical and statistical analysis has helped the research to have a quantitative analysis of the digital government in Kuwait and their respective challenges to deal with. Graphical analysis has helped this research to identify point reviews of different groups of people.

3.8 LIMITATIONS

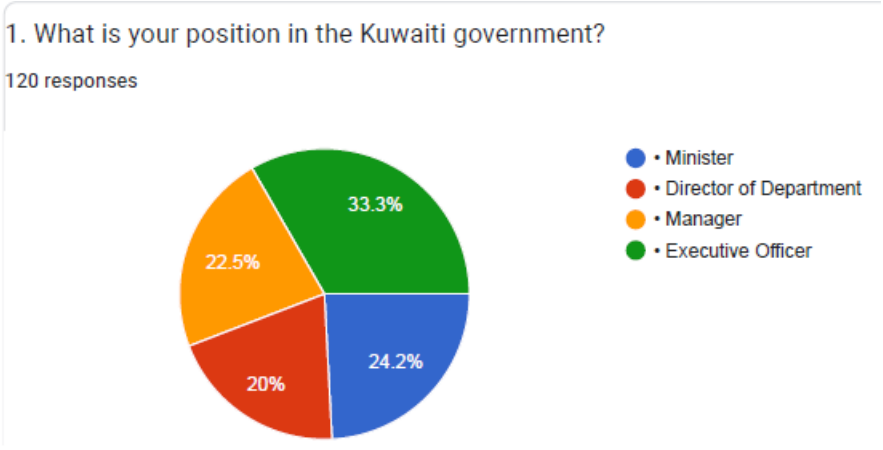
The limitation of this research methodology is that using a mono method only focuses on the quantitative aspects of data. However, the research should also focus on an in-depth exploration of qualitative aspects of digital government in Kuwait. The methodology has explored the justifications for using the positivism philosophy and deductive approach for the research.

4. RESULTS

The online questionnaire has been designed to explore the understanding and opinions of government employees towards the current and future sustainability of digital government initiatives. The questions were categorized to understand the experience and skill sets of the individual respondents and then an exhaustive closed-ended survey about the degrees of citizen responsiveness, training frameworks, and the linkages between the private and government sectors for understanding the quality of digital government initiatives in Kuwait.

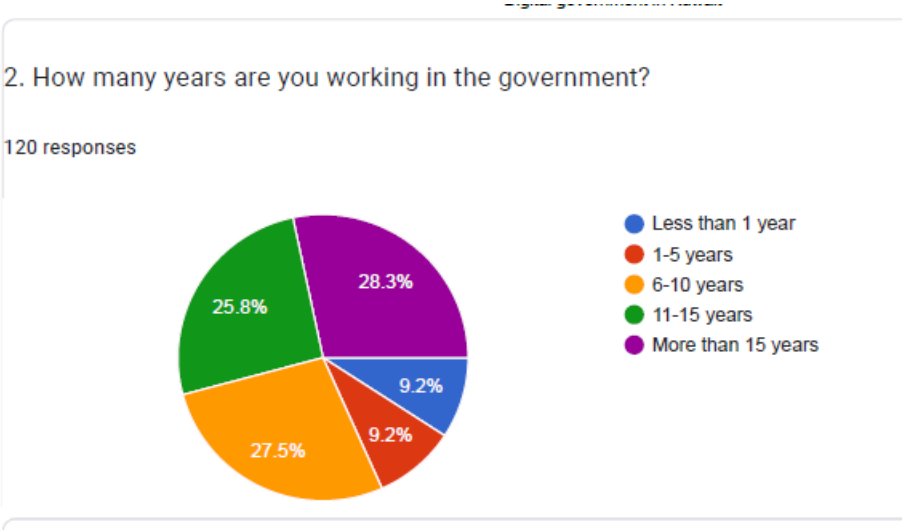
4.1 ANALYSIS OF RESULTS OF ONLINE QUESTIONNAIRE

Question 1



The online questionnaire was primarily disseminated to government employees in Kuwait. With the various designations of the Minister, Director, and managerial cadres, the questionnaire attempted to understand how the individual status and technological expertise of the individual employee will shape the outcomes of the digital government policies. The majority of the responses recorded, that is 33 percent, were officials that carried some extent of executive capabilities. The managerial cadre also significantly participated in the questionnaire. This might lead to results in findings where the actual interaction between the public and the government in the wake of new digital government initiatives could be effectively analyzed.

Question 2



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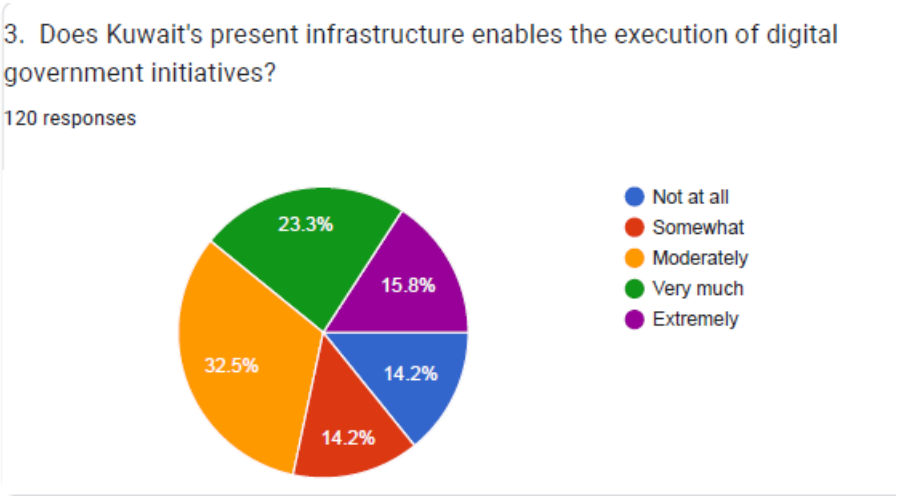
The second response related to the quantum of experiences of the participants. The majority of the responses recorded were from employees who were working for less than one year. This assumes importance due to the proliferation of digital government initiatives in the last year in the Kuwaiti

government (Rahmat and Salim, 2023). These respondents will be able to shed light on how the user engagement and citizen interaction capabilities. Around 25 per cent of the respondents indicated that they had the experience of more than 10 years. The responses of these participants will be able to focus on the future strengthening of digital government initiatives. The number of participants who had experience between one to five years was low, which reflects the changing job markets and how digital government initiatives are mainly manned by those having more than 10 years of experience at the top echelons.

Question 3



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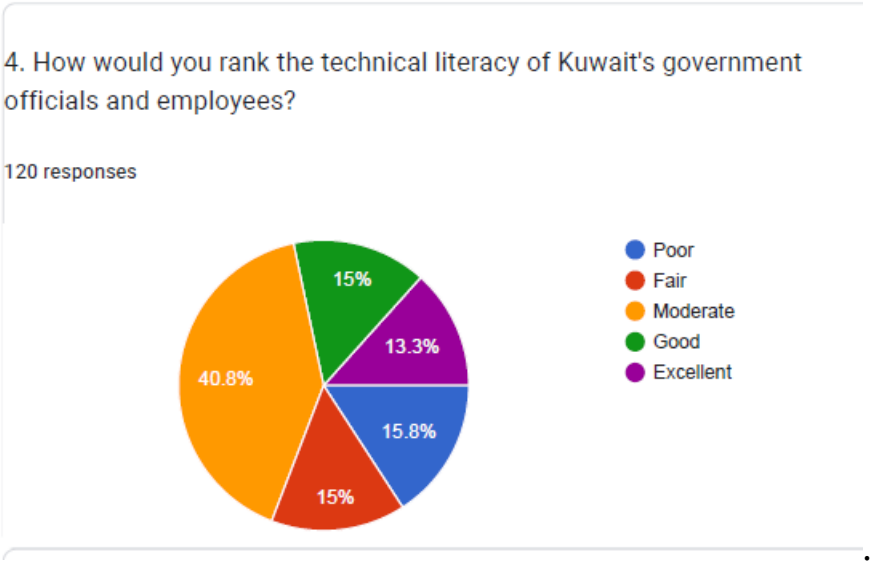
The responses to this question give an overarching view of the alignment of digital government initiatives with the required international benchmarks for technology. More than 30 per cent of the respondents were of the view that the systems of technological change in the government are in moderate alignment with the required needs. However, the respondents of around 15 per cent felt that there was a mismatch in the digital

government initiatives. This indicates that there are areas that need critical attention for the gauging of user engagement and citizen responsibility in the maintenance of digital government initiatives (Yildrim and Bostanci. 2022). 14 per cent of the respondents said that the execution of digital initiatives needs further improvement in tune with the international benchmarks.

Question 4



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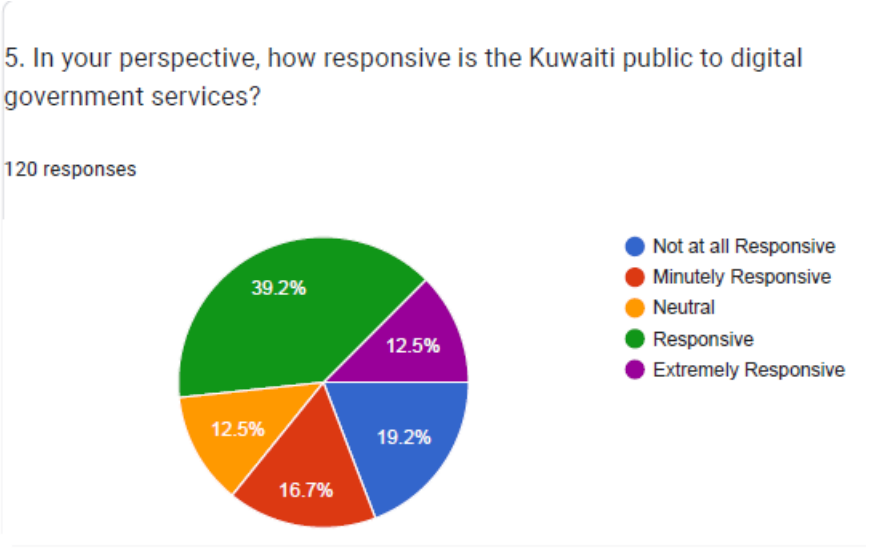
This online questionnaire further probed into the levels of technical awareness of the digital government initiatives among those who are employed in Kuwait and associated state institutions. Around 40 per cent indicated that they have a good grasp of how technical considerations need to be carried out to ensure digital government initiatives are carried out with efficiency and worker productivity (Quaye and Sneiders, 2020).

However, around 15 per cent of the respondents indicated that they do not have the requisite technological wherewithal to conduct the effective alignment of citizen-centric services with the changes that are being envisaged in the digital government policies.

Question 5



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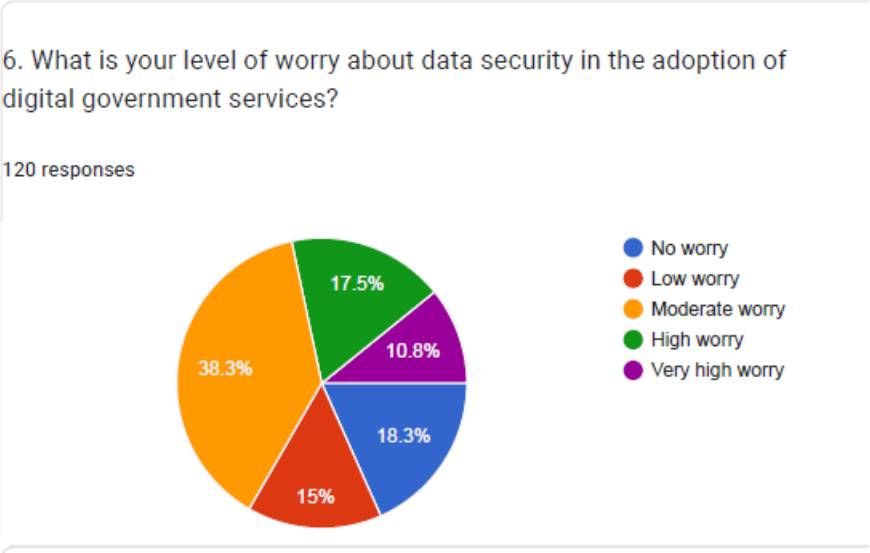
This question relates to the measurement of the degree of responsiveness of the Kuwaiti citizens and their levels of trust in the government's technological capabilities. Around 39 per cent indicated that Kuwaiti citizens have a favourable disposition towards using more government digital initiatives (Xiao, Han and Zhang, 2022). Around 16 per cent indicated that they do not have the requisite alignment between the citizens and the government. This shows that the upper echelons of government employees are not in tune with the need for a

calibrated show of digital government initiatives of the Kuwaiti public. Furthermore, 12.5 per cent indicated that the government has not granted their requests for enlarged representation of government employee feedback into the digital government initiatives.

Question 6



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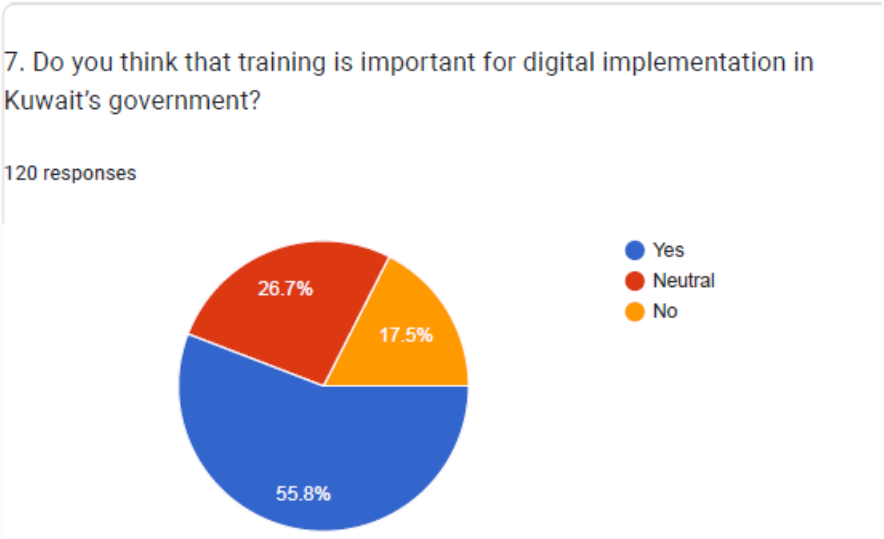
The online questionnaire further targets the levels of internal anxiety in government employees towards the adoption of new technologies for the dissemination of government services. More than 38 per cent indicated that they have a neutral disposition and are aware of the risks of technical assimilation of citizenry services. Around 17 per cent of the respondents indicated that they have a high degree of worry. This may be due to the breakdown of the traditional authoritative structure and there may be job displacement (Makki and Alqahtani, 2022). However, 18 per cent of the respondents indicated that they do not have anxiety related to technological governance.

This respondent group may be of little experience and have the innovative capability to carry forward digital government initiatives.

Question 7



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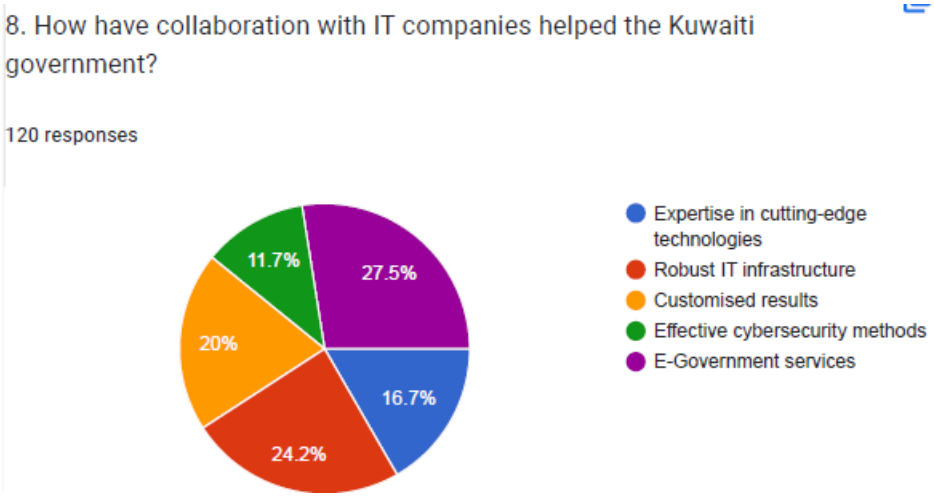
The next question in the survey related to the significance of training for the implementation of digital initiatives. 55 per cent indicated that the government implementation training initiatives are in tune with social expectations. 26.7 per cent indicated that there needs to be a nuanced evaluation of the quality of training practices as they may be outdated. Around 17.5 per cent of the targeted responses indicated that the government strategies have refined the training methodologies concerning addressing the technological unfamiliarity of the middle management group.

Question 8



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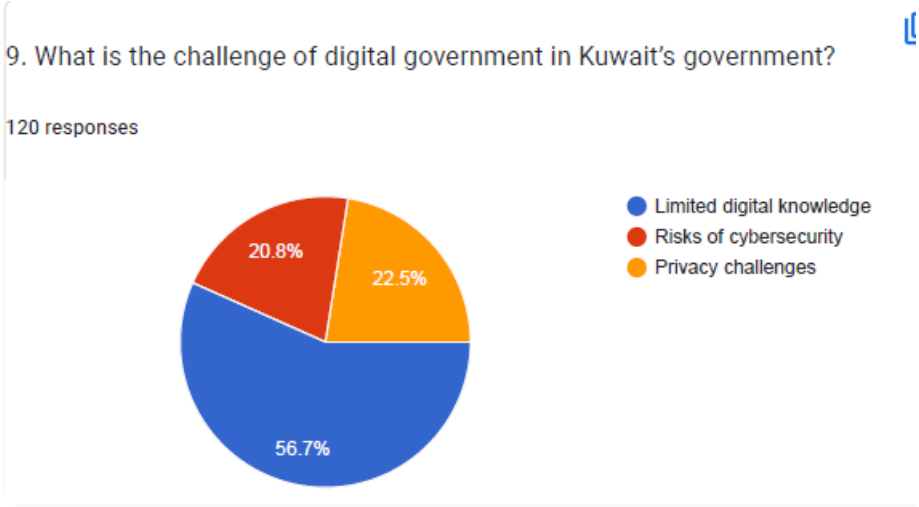
This question is related to the assessment of the collaborative activities of the private sector with digital government initiatives. 20 per cent of the respondents opined that the government services have been customized to acquire the desirable results. 16 per cent feel that Kuwait is showing enhanced elevation of cutting-edge technologies in digital government initiatives (Gong, Yang and Shi, 2020). Furthermore, 11 per cent indicated that cybersecurity awareness of the target population should be increased. This question sheds light on the synergized elements of the public and private sectors in Kuwait and the degree of future success that might be realised.

Question 9



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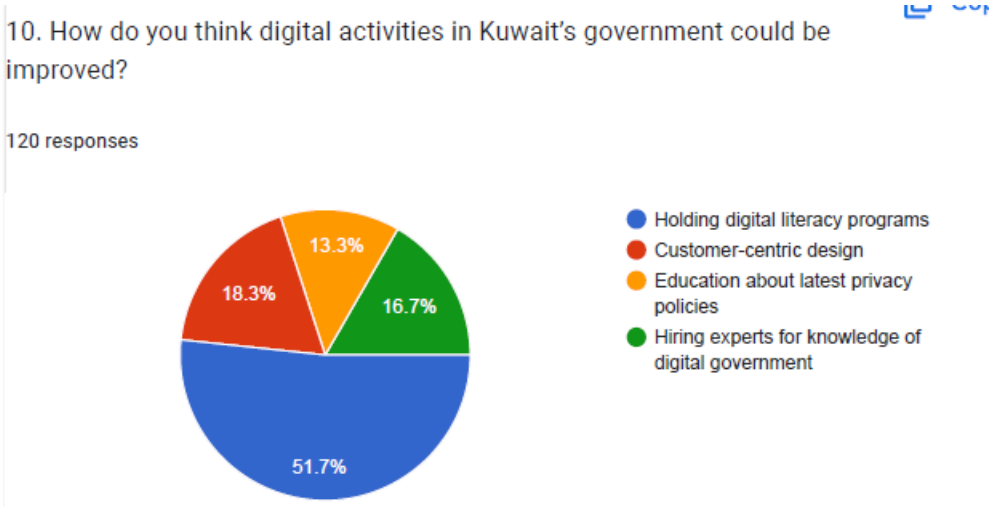
The online questionnaire further assesses the various challenges that are present in the digital initiative implementation among government employees. 56 per cent indicated that there are obstacles in the future strategic design of digital initiatives. Around 22 per cent indicated that they have distrust in the current initiatives due to the incidence of privacy issues. Around 23 per cent indicated that there are comprehensive chunks of employees who do not have the required cybersecurity knowledge for the protection of their individual data and citizen finances.

Question 10



This question relates to the future improvements that need to be made in government policies for the better dissemination of citizen services in technological lines. 51 per cent of the respondents indicated that digital literacy programs should be introduced among the government employee base so that they become proficient in customer-centricity (Weerakkody et al., 2016). 16 per cent indicated that educational programs should be carried out to convey the dynamic privacy policies and strategies of digital data protection.

Therefore, the analysis of the various online questionnaire results shows the high degree of responsiveness of government employees towards the dissemination of government policies through digital means. The results further elucidate the significance of training methodologies for existing staff. A correlation is observed between the private and government sectors in increasing cybersecurity awareness among the public so that future implementation of digital initiatives will not encounter any major blowback from the private and sovereign investors.

5. Discussion

Potential facilitators of assessment of the social influencers include interventions that encourage a positive attitude towards government digital initiatives. Leadership endorsements at the highest levels suggest a coherence between the top echelons of the government and the citizen groups (Melin and Axelsson, 2019). This could further lay the foundations for increased technology adoption. The incidence of a support culture will lead to the measurement of employee perceptions towards the current quality of the training methodology frameworks given to newly recruited employees. The online questionnaire has evaluated the usability quotient of the current technology frameworks and how the performance expectancy of the employees may translate to accelerated trickling down of benefits to the citizens (Osifo, 2018). The Kuwait government workforce has faced a barrage of facilitating conditions in terms of enhanced performance incentives, and international training benchmarks, and this has led to an increased perceived social utility. Extending the same framework to citizens will require an assessment of citizen behaviour towards technology and the incidental variables of data privacy and anti-surveillance mechanisms.

Technical literacy is extremely important for employees to work in a digital government. As per the survey results, 40% said that the technical literacy of employees in the government is moderate. This shows that government officials believe that they need more digital training to survive in the digital government of Kuwait. Martzoukou (2021) supported this and stated that weekly training is a suitable objective for government officials to engage themselves with digital literacy. Another important factor that needs to be paid attention to is whether the Kuwaiti people respond to the digital government or not. As per the opinions of Kuwait's government officials,

less than half of the people respond to the online services of the government. Aljazzaf et al. (2020) have further added that the reason is people are not accustomed to digital services as effectively as they should. Therefore, Kuwait should start educational programs for citizens to increase their awareness about digital literacy. It could help the citizens to be efficient in using digital services from the government.

Digital services might be beneficial for government activities but they could have certain aspects of concern which should also be focused on. Similarly, when government officials were asked about their concern level regarding digital government initiatives, nearly half of them expressed moderate concern and some expressed their highest level of concern. This could be due to employees not having accurate skills to operate in the digital government or a severe breakdown in digital technologies. Helsper (2021) have stated that digital initiatives are beneficial but they also have extreme risks due to imbalances in logical infrastructure. Thus, it is vital for the Kuwaiti government to protect their digital government. All these concerns for the safety of the digital government could be solved by initiating training sessions every week in the Kuwaiti government. Chanana and Sangeeta (2021) have supported that digital training requires intervention from outside experts to maintain an effective training session. Therefore, Kuwait's government must appoint experts from technological companies to train their employees and help them gain an understanding of digital tools and technologies. This would help them grasp the idea of digital initiatives and prepare themselves for digital battles with other governments.

One of the most important aspects of the digital government in Kuwait is its collaboration with IT companies. The respondents have stated that IT companies have helped in improving the e-government services and creating a robust IT infrastructure in

the Kuwaiti government. As per the indication of the study of Arman et al. (2022), Kuwait's investment in customised results has increased after being collaborated with IT companies. Citizens are now receiving personalised results which is the outcome of a digital government. Some other benefits that have been highlighted are cutting-edge technologies and effective methods of cybersecurity (Mishra et al. 2021). Therefore, it's extremely necessary to work on the concerns of digital government so that the benefits could be enjoyed to make services for citizens easier.

In every digital setup, the major challenges that come up are privacy concerns and cybersecurity risks due to the increase in hacking in the business world. However, the most basic challenge that it faces is the limited digital knowledge of people which increases complexities. Similarly, the survey respondents have answered that the most important challenge for Kuwait's digital government is limited awareness of employees in the digital government. If employees would be more educated about the various aspects related to digital initiatives, it would help them to cooperate with technological changes over time and quickly adapt themselves to those changes. Cetindamar et al. (2021) have stated that digital governments in any country should have digital literacy programs to educate employees. Similarly, the survey results have highlighted digital literacy programs and also customer-centric focus has been emphasized for improving digital literacy.

6. Conclusion and Recommendations

The existing research has been undertaken by thinking about the use of digital government in Kuwait and how established it is. This research has used extensive literature studies to show Kuwait's digital government initiatives started in 2000 to make people have better services. The country has been able to move forward with its digital government initiatives and gain a better customer response. This research has used an online questionnaire with 120 government officials of Kuwait to answer about digital government in Kuwait. They have given their responses through surveys collected in Google Forms. As per their survey, it is understood that Kuwait's digital government is strong but it also requires intervention in training to increase the literacy of employees in the government. On the other hand, this research helped in knowing that IT companies in Kuwait have helped the government to improve their customized results, IT infrastructure and e-government services. Thus, the government could solve the challenges of lack of digital awareness by holding educational programs and policy classes for government employees.

6.1. Recommendations

Derived from the survey results, it is known that the Kuwaiti digital government is facing extreme issues of limited digital knowledge along with cybersecurity concerns and privacy issues. In order to solve this, the Kuwaiti government would have to conduct sessions with employees in which they could talk about their problems. Knowing employees' problems would help to understand ways through which their problems could be solved. Employees should be provided with digital guidebooks for studying technological parts and gathering an understanding of handling digital technologies in the governmental landscape (Afarini and Hindarto, 2023). Along with that, the R&D department should carry on with its research

on trending cybersecurity solutions to prevent cybersecurity attacks.

6.2. Future Research

The concept of digital government is a progressive thought for governments all over the world. Therefore, Kuwait's digital governance is a strong concept for conducting research in the future. On an additional note, research should be conducted by using the primary qualitative method of interview as it helps in getting in-depth information about the research subject. The government officials could be interviewed to learn about their in-depth experiences in the digital government of Kuwait. This could enhance the depth of the future research of digital government.

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