

CHAPTER 5

DISCUSSIONS AND CONCLUSION

5.1 Introduction

This research was presented with the intention of examining the relationship between Jordanian e-government services, and employees' job performance. It was also used to understand the moderating effect that these variables have on each other. This chapter presented an analysis of the research and the conclusions that can be drawn, implications of the study, and potential limitations and suggestions that can be applied to future studies.

5.2 Background Contexts

The following objectives were the focal point of the study:

1. To identify the level of e-government services within the Jordanian civil status and passport department.
2. To identify the effect of e-government services on job performance in the Jordanian civil status and passport department.

3. To identify the differences between job performances based on the age factor in the Jordanian civil status and passport department.
4. To identify the moderating effect of age in the relationship between e-government services and job performance.

The following questions were then used to understand these objectives:

1. What is the level of e-government services in the Jordanian civil status and passport department, from the perspective of the study sample?
2. What is the effect of e-government services on job performance in the Jordanian civil status and passport department?
3. What is the differences between the job performance based on the age factor?
4. What is the moderating effect of age in the relationship between e-government services and job performance in the Jordanian civil status and passport department?

The impact that e-government services has on employee performance is not yet fully understood, as there is only minimal research on the topic so far. Considering that employees are a fundamental component of such services, it was imperative to better understand this relationship. E-Government services have been a core facet of the Jordanian political structure for the past (20) years. This has transformed its service delivery, making it exponentially more efficient and effective. These services are now performance-driven and better equipped to provide high-quality services focused on the customer and relevant stakeholders.

The Jordanian government tried to improve performance through the uptake of e-government services. Their belief was that by focusing on performance, competition

would naturally develop, and economic growth would follow. However, the government experienced difficulties that have led to issues in succeeding with this goal.

One of the government departments that strove to implement the e-government services, the civil status and passport department, struggled to improve the job performance of its employees.

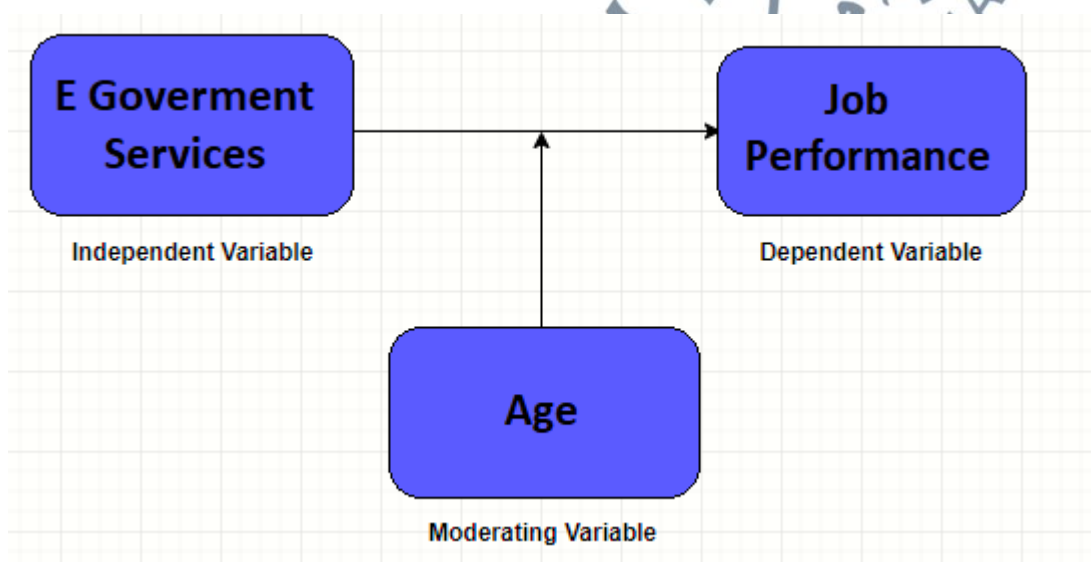


Figure 5.1: Developed Theoretical Framework.

Figure 5.1 shows the framework designed for the purpose of the study, with minor alterations. It was comprised of an independent variable (e-government services), a dependent variable (job performance), and a moderating variable (age).

The study utilized Cooper and Lichtenstein's (2010) quantitative methods to create statistical data that can empirically test the relationship between the dependent and independent variables (Hair, Bush & Ortinau, 2000). Using this type of data, researchers can collect information from a greater number of individuals (Morgan,

1998). The collected information is not enough to be able to draw conclusions from, and it must be turned into useful information via statistical programs such as SPSS and AMOS. These were used to determine the reliability of findings, as well as create a descriptive and regression analysis.

A (20)-items questionnaire was created from the constructs for the variables and covered e-government services and job performance. All employees who worked on the front line in the Jordanian civil status and passport department received the questionnaire (in the form of a survey). Researchers had (335) responses, which translated to a response rate of (83.15%). Interaction between variables was tested for using SEM.

The Chapter 4 results were discussed in four separate sections: Section 1 measured the level of e-government services, and Sections 2, 3, and 4 correlated to hypotheses that were presented in Chapter 1. To understand the job performance of civil status and passport department employees on the front line, researchers used age measurements, which were then used to test the impact of e-government services on their job performance. The age measurements were also used as a moderator's effect. The theoretical models used in the study were deemed valid by testing the measurement and structural model. Figure 5.2 highlights the results of this structural model. Researchers used a moderating analysis for these results, as was predicted in the conceptual framework that was created specifically for this study (discussed thoroughly in Chapter2). Their results were significant regarding the joint effect of all variables that were tested.

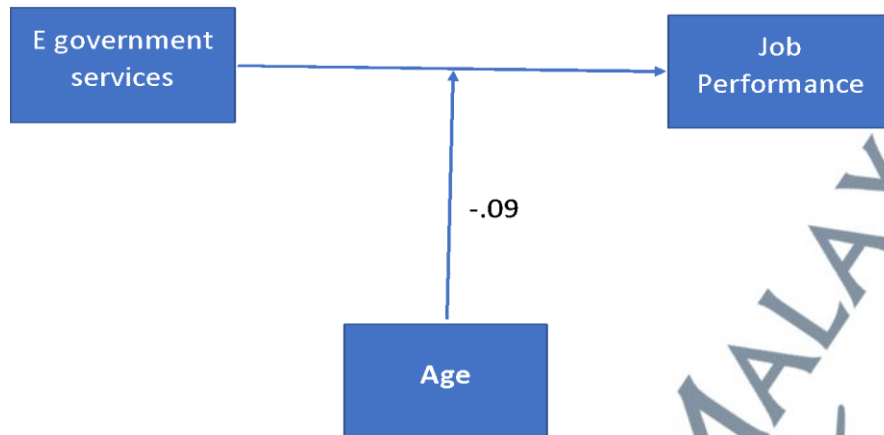


Figure 5.2: Structural Model

5.3 Discussion of Findings

The following section discussed the study objectives in greater depth.

Objective 1: To identify the level of the use of e-government services in the Jordanian civil status and passport department.

The initial objective of this study was answered by calculating the significance rate of the usability of e-government services. This was found using information gained from various descriptive statistics - means, standard deviations, and the relative importance index (RII). Table 4.6 highlights these analyzes. This table shows a substantial level of usability of e-government services by frontline civil status and passport department employees, according to the perceived indicators.

Prior studies also had similar results pertaining to levels of e-government service usability (Darwazeh, Khrisat & Al Dajah, 2016; Shannak, 2013; Mashaqbeh, 2012; Alsalloum, 2011). This strengthened the reliability of the current research. It was also

noted that in regards to the civil status and passport department employees, the usability of e-government services was high when implemented in civil affairs.

Objective 2: To identify the effect of e-government services on job performance in the Jordanian civil status and passport department.

This objective explained the results of H1.

The findings of this research are in support of H1. For this hypothesis, e-government services were the independent variable, and investigated using job performance as the dependent variable. These results were shown in Table 4.15, and the research found a coefficient estimate of ($\beta = 0.629$). This finding highlights a relationship of significant value at a p-value of less than (0.01).

The positive value of the coefficient estimate results in a positive relationship between e-government and job performance. Therefore, two different possibilities are suggested: high implementation of e-government services constitutes high job performance, or low usability implementation of e-government services constitutes low job performance.

This conclusion was supported by existing studies from Darwazeh, Khrisat, and Al Dajah (2016), Shannak (2013), Mashaqbeh (2012) and Alsalloum (2011). They too found positive relationships between e-government services and job performance. This finding was predicted since the high usability rate of e-government services in civil affairs is known to cause high job performance in civil affairs staff, and vice versa.

There are two perspectives that must be considered because of this positive relationship. The first is that when the usability of the implementation of e-

government services is high, then corresponding job performance will also be high. The second is that when the usability of the implementation of e-government services is low, job performance will also be correspondingly low. This perspective is shared by Alsalloum (2011), whose research proved that an important factor of job performance is the usability of e-government services.

The findings presented in this research implied that when e-government services are utilized, more tasks are performed, tasks are performed faster, and human errors are reduced.

Objective 3: To identify the differences between job performances based on the age factor in the Jordanian CSPD.

The second hypothesis, H2, was intended to determine what relationship existed between age and job performance, if any. Results from the research indicated that age level does have an effect on job performance when age is the independent variable and job performance is the dependent variable. The analysis to test the relationship between age and job performance are found in table 4.15. A coefficient value ($\beta = 0.048$) at a p-value less than (0.001) did not indicate a relationship between the age variable and job performance construct. The findings of this study were not in support of H2, showing that job performance is not altered by age. The coefficient value of ($\beta = 0.048$) highlighted a lack of any significant relationship. These findings were also in accordance to findings of Mashaqbeh (2012). He found that job performance is not altered by age intervals.

Objective 4: To identify the moderating effect of age in the relationship between e-government services and job performance.

This objective will explain the result of the third hypothesis, H3.

Hypothesis H3 stated that the age of employees would moderate and reduce the effect of the relationship between e-government services and job performance. Analysing this hypothesis involved an independent variable, moderator variable, and the dependent variable: e-government services, age, and job performance respectively. According to Baron and Kenny (1986), using a moderation analysis would suggest a direct effect and a joint effect at three different levels between the variables.

E-Government services and job performance created the first level of this relationship, the second was comprised of age and job performance, and the interaction between e-government services and age (e-government services*age) and job performance was the third.

Table 4.15 and Figure 4.5 presented findings of both negative and positive relationships between variables, when coefficient values of ($\beta = 0.048$, $\beta = 0.63$) and ($\beta = -0.092$) were used. It can be concluded that this research suggests some form of interaction between e-government services and age, according to the moderation model used by Fairchild and McQuillin (2010). This interaction then predicted job performance as a result.

Fairchild and McQuillin (2010) used a single moderation effect on e-government services and job performance. It found that age did partially moderate these variables, which was in support of H3. Therefore the research showed that age is a significant negative determinant of relationships with e-government services and job performance.

It could also be concluded that the relationship between e-government services and job performance had an effect on the moderation effect between variables. Positive relationships were found in the research, which indicated two possible perspectives. The first is that if the usability of the implementation of e-government services is high then job performance will be high. The second is that if the usability of the implementation of e-government services is low, then job performance will also be low.

This was backed up by similar findings from Darwazeh, Khrisat and Al Dajah (2016). Their research found a positive correlation between e-government services and job performance. It is also in accordance with Alsalloum (2011), which found that the usability of e-government services was a significant factor for job performance. This research also found that e-government services uptake was associated with achieving more tasks at work within work hours, increased work speed, and a reduction in human error-related incidents.

Regarding the second level, age and job performance, a direct relationship was found. This relationship was also found in research by Mashaqbeh (2012). He proved that there is no interaction between age and job performance.

This research found that there was a joint effect interaction between (e-government services*age) and job performance, for the third relationship level. There was a statistically significant moderation effect between the age of employees and the usability of e-government services. This is in relation to their multivariate association with job performance, accounting for the correlation between age and job performance, as well as their interaction. The research also showed that there is a potential significant difference in the effect of e-government services on job

performance across age. It is possible that the job performance of certain age groups may experience a reduced effect of the e-government services, caused by their age.

This study found that some employees felt as though using the system was not easy, and was difficult to learn. This was backed by findings from Morris, Venkatesh and Ackerman (2005), who found that age differences resulted in differences in the adoption of technology and its use in the workplace. This consistency in findings suggests some form of underlying causal mechanism that is responsible for different levels of technology adoption, depending on age.

An explanation for this relationship is that younger employees (those aged 20 to 39) were more likely to have been exposed to technology at a younger age. This may have occurred as early as elementary school.

This research also aligned with Pearson, Bahmanziari, Crosby and Conrad (2003) study. This indicated that age would affect an employee's response to implementing new work information systems, and that different ages have different responses. Somewhat conversely, Al-Jamal and Abu-Shanab (2015) found that employees want to use e-government services, but their age can be a hindrance. Therefore it was considered important to investigate this variable. Boomers (2000) found that as a society, people frequently group people together according to their age, labelling them and presenting each group as fundamentally different.

Using a moderation effect in the research showed that age might be a factor that could improve job performance in companies. This point was solidified further by Baron and Kenny (1986), who proved that the direct effect was improved and controlled by joint effects.

5.4 Implications of the Study

A number of implications have been suggested, according to the outcomes of the study.

5.4.1 Methodological Implications

This research utilized methodology that assessed both direct and joint effects of age on the relationship between e-government services and job performance in the front line employees of the Jordanian civil status and passport department. The study highlighted the fact that this was significant and should be considered.

Information that was collected from employees of the civil status and passport department was analyzed with SPSS, standalone FACTOR programs, and AMOS. The SPSS 22 statistical program confirmed the validity of one of the construct sides with reliability analysis, descriptive analysis, demographic information analysis, and exploratory factor analysis. FACTOR programs were used to establish the factorial validity via the exploratory factor by using measured indicators for dimensionality. The AMOS 22 statistical program focused on the direct and joint effects of the model and examined the research hypotheses by assessing convergent validity and discriminant validity.

Using SEM turned out to be beneficial because it provided a moderation analysis, and greatly contributed to researchers being able to estimate indirect and joint relationships (Baron & Kenny, 1986). Moderation analysis is more beneficial

than standardized regression approaches since these require numerous sequential estimations. Utilizing moderation analysis can also help to potentially identify three main elements (Fairchild & McQuillin, 2010).

5.4.2 Theoretical Implications

A relationship exists between e-government services and job performance - this research provided sufficient evidence to draw this conclusion. This study also built upon an existing body of literature that also highlights the relationship between e-government services and job performance and supports their results (Kareem & Haseeni, 2015; Shannak, 2013; Darwazeh, Khrisat & Al Dajah, 2016; Mashsqbeh, 2012). However, there was prior research that linked these two variables from this perspective (Mazyodinekhan, 2013). This research extended the existing information on the subject by presenting different possible ways to understand the context of the relationship between e-government and job performance.

This study was significant specifically for the Jordanian government. It provided information regarding the benefits of e-government services for the improvement of employee job performance. It was also found to be significant for future researchers, by developing a general framework that can be used to test the relationship between the usability of e-government services and job performance within government sectors.

Discussing within the theoretical implications, the study related to theories like Stakeholders Theory, Technology Acceptance Theory (TAM), Theory of reasoned

action and some others as well. To discuss in detail, we found some implications of the Technology Acceptance Model within the study as we mentioned in chapter 2, assumptions based on the TAM said that introduction of e-governance will have a direct impact on the comfort of the employees of various ages, but it won't have much effect on the job performance. AS TAM had suggested, the employees who previously used a traditional system, will have similar expectation of output generation and productivity as they had with the traditional systems (Lu, Yu, Liu & Yao2003)

Looking at another relevant theory, it is believed and proven that the Value Theory also provides a deal of theoretical implications to this study. As the theory suggested, when designing e-government systems, it is important to consider this theory to ensure that what is produced from the systems is important to the users as when the e-government system produces much output, which is of no value to the users, it may kill the users' morale, leading to low performance. As we studied in this research, what mattered to the employees for their output and the service that they are providing being the front-line staff members. Thus, when we considered job performance and e-governance as the primary variables of the study, the result suggested that they are not impacting each other.

This study provides an innovative perspective that aims to understand the factors affecting the relationship between e-government services and job performance. It concluded that age is a significant moderating factor for this relationship.

This study has created a foundation regarding age a moderating factor in this context, which can be built upon by future research. The usefulness of this research will become more evident when it is used in conjunction with future studies that work to improve job performance.

5.4.3 Practical Implications

This research has multiple practical implications in the current workforce. Morris, Venkatesh and Ackerman (2005) pointed out the variation between young and old employees and suggested that future training programs structure themselves according to both demographics. For example, instrumentality is a significant factor for younger staff, but is not necessarily as important for older employees. When developing new technology and corresponding training, upper management staff should emphasize how this technology will improve productivity and results, even though it may not be necessary for older workers.

Conversely, older staff is more affected by perceived behavioral control, in comparison to younger counterparts. Therefore trainers may also wish to focus on how easy technological developments are to pick up. This can encourage skeptical staff to opt into technical upgrades more readily. The development of training programs should take into consideration these differences in learning styles and focuses. For example, older staff often feels as though they are not suited to learning new methods, and therefore lack the confidence to make the most of new training (Plett, Lester & Yocum, 1991). Older staff also frequently takes longer to pick up new skills, when compared to younger employees (Sterns & Doverspike, 1989).

The research also indicated implications that specifically target managers/senior staff. There is a need for those in control to understand how their staff will respond to and use new technology. Often, technology is implemented for different groups at different stages, according to set demarcations (such as demographics or function,

depending on the situation). These senior members of staff also need to ensure that the new technology is easy for their employees to use and they will find it useful.

Software designers and administrators working in government sectors need to understand this. Information system that is easy to master and is useful should be constantly being improved upon. Designers and administrators also need to communicate with the target audience of employees about Information system that is simple, and beneficial for their job tasks. IS needs to be developed according to staff job requirements because research shows that the response from the target users is more positive (Alsalloum, 2011).

This study posits that staff in power should strive to create incentives that positively influence their staff's response to new technology. This practice can be applied to e-government services. Management need to develop and facilitate the distribution of programs that offer training and on-going support for Information system (Alsalloum, 2011; Morris, Venkatesh & Ackerman, 2005; Plett, Lester & Yocum, 1991).

This research concluded that management strategies pertaining to the adoption and implementation of new technologies in the workforce should be tailored to suit the needs and preferences of different age demographics (Morris, Venkatesh & Ackerman, 2005).

This research provided a supportive contribution to the existing literature by empirically examining the moderation effect that age has on the relationship between e-government and job performance. This had not been studied in this context before. Findings from this study show that age does have a significant moderation effect between e-government services and job performance.

This research also looked that the effect that age has on the relationship between e-government services and job performance as a moderating factor. Its findings indicate that age has a significant moderation effect between e-government services and job performance in the government sector. Governments should, therefore, encourage staff in positions of power to focus on catering to different age groups when attempting to improve job performance in employees. This suggestion is backed by the results that were found within the Jordanian civil status and passport department governmental department.

5.5 Limitations

This research is limited by two factors pertaining to the research method and research design. Due to the chosen research method, quantitative data was gathered through questionnaires that were given to front line civil status and passport department staff.

The study sample was therefore limited to front line civil status and passport department staff, and this alone may not accurately represent the opinions held by other staff members in different governmental sectors, let alone private-sector employees. The public sector is incredibly diverse and contains a wide range of departments. Because of this, any generalized results may inaccurately represent the wider workforce.

The research design that was used for this study also has a limiting effect on the results of the study. A multivariate data analysis using SEM (the design used) is

considered to be static. It limited the study to moderation analysis, which could only direct attention to the causal effects of constructs. This model can also be used for the purpose of mediation analysis, with different variables.

5.6 Recommendations and Future Research

There are multiple potential avenues to explore in order to develop research on the relationship between e-government services and job performance. Future studies that focus on this relationship should attempt to collect data on employee preference pertaining to the usability of e-government services and job performance. A study that uses such an approach is likely to receive a greater range of responses than this study could retrieve.

Future research should also attempt to gain a sample that is not restricted to a certain organization or sector of a company. This will allow for a more accurate generalizing of results. Research that stems from this should aim to obtain information from participants in multiple departments, not just one. The greater representation of staff in the public sector is likely to verify the results found in this study. A greater level of diversity in perspectives regarding the relationship between e-government services and job performance will make population-wide inferences easier and more accurate.

This sample should not be used solely for the moderation analysis, despite the goodness of fit measures. It can also be used to create a mediation analysis with respect to job performance. Utilizing a mediation analysis, future studies will be able

to understand the main cause (or causes) that affect job performance. Therefore it will include a cross-sectional design for correlational analysis, but also provide the opportunity for causal inferring.

Many studies and researches have been undertaken to evaluate the impact of e-government in relation to cost, quality, revenue generation and perceived value delivered to customers, but very little research has been undertaken to assess the impact in relation to employees, who are the first caretakers in the whole process, hence there is a need to develop a framework for assessing the impact of e-governance on employees.

Information technology reduces the traditional requirements associated with operating procedures, which in turn helps to streamline workflow and content. But as the expectations regarding job performance increase, the pressure placed on employees to meet these expectations also increase (Attewell & Rule, 1984). Information technology constructs such as performance, attitude and usage behaviour surrounding computers is known to be associated with computer-related anxiety (Fishbein & Ajzen, 1975; Davis, Bagozzi & Warshaw, 1989; Campeau & Higgins, 1995; Stajkovic & Luthans, 1998; Fagan, Neill & Wooldridge, 2004).

Future research should also focus on specific related areas of performance such as quality of work, job loyalty, and compliance. These focal points require information on a number of topics in relation to each other, such as creativity and personal efficacy, creativity and personal effectiveness, computer skills among employees of e-governance. This should be based on a large sample and independent variables, to authenticate any potential relationships.

Researchers require a strong evaluation method to obtain a quantifiable standard from their work, in addition to variables that are known to affect job performance. This will also serve to determine a more accurate and widely generalizable conclusion on the effectiveness of e-government services on job performance.

5.7 Conclusion

This study has come to the following conclusions:

1. The relationship between e-government services and job performance has been examined, and it is appropriately grounded by the theoretical framework that is found in the literature.
2. Data samples from (335) front-line employees in the civil status and passport department in Jordan were used for this study.
3. Moderation analysis was employed through an SEM approach using AMOS 22.0. Through this, the study presented a well-fitted model and suggested joint direct effects of involved variables.
4. The study findings are summarized:

Objective 1: The usability level of e-government services is high.

Objective 2: H1: The application of e-government services has significant effects on job performance.

The hypothesis is supported by high and significant coefficient estimates. This depicted a positive relationship direction, which indicated that a high implementation rate of e-government services has contributed to high job performance. This

hypothesis has been supported by previous studies (Kareem & Haseeni, 2015; Darwazeh, Khrisat & Al Dajah, 2016; Mashaqbeh, 2012; Alsalloum, 2011) within in the e-government services context.

Objective 3: H2: Age level has significant effects on job performance.

The findings did not support this hypothesis. The age of the employees was not statistically significantly associated with their job performance. This finding supports previous research completed by Mashaqbh (2012).

Objective 4: H3: Age moderates the relationship between e-government services applications and job performance.

This hypothesis was tested through structural equation modelling path analysis (moderation). As suggested by Baron and Kenny (2010), the estimated path coefficients in this study indicated a joint direction of the relationships between two pairs of variables. This research indicated a strong direct effect on the relationship between e-government services and job performance. Age operates as a joint direct effect involved in relationships with both e-government services and job performance. Consequently, the hypothesis H3 is supported by these findings.

5. This study identified a gap in current literature and aimed to contribute to the growing body of information on the topic.