

An- Najah National University
Faculty of Graduates Studies

**Assessment of Development and Application of
E-Municipality Strategies in Palestine**

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**This Thesis is Submitted in Partial Fulfillment of the Requirements for
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Dedication

This Thesis is dedicated

To my family... If not for them, I would not survive in this life, of them I learned to withstand, no matter what the difficulties.

To the big heart and the first cheerleader

My dear father

To who has entrusted me to God and taught me life

My mother is affectionate

To those who waited for my success and reinforced my dreams

My brothers and sisters

To my dear teachers, colleagues and friends

To everyone who encouraged me and helped me complete this work

I dedicate this search

Asking Allah -Almighty Merciful- to be crowned with success and acceptance by the honorable members of the Committee.

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Finally, Thanks to all those who supported me to achieve my work successfully.

الاقرار

أنا الموقع أدناه، مقدّمة الرسالة التي تحمل العنوان:

Assessment of Development and Application of E-Municipality Strategies in Palestine

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Declaration

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

Student's name:

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Table of Contents

No	Subject	Page
	Dedication	Iii
	Acknowledgement	Iv
	Declaration	V
	List of Table	X
	List of Figures	Xi
	List of Acronyms	Xii
	Abstract	Xiv
	Chapter One: Introduction	1
1.1	Introduction	1
1.2	Significance of the Study	3
1.3	Problem Statement	5
1.3.1	Research Questions	5
1.4	Objectives of the Study	6
1.5	Research Approach	7
1.6	Thesis Structure	8
	Chapter Tow: E-Municipality Literature Review	11
2.1	Introduction	11
2.2	The Concept of e-Municipality	12
2.2.1	Definition of e-Municipality	12
2.2.2	Benefits and Duties of e-Municipality	14
2.3	The Concepts of Strategy	16
2.3.1	Strategy Definition	16
2.3.2	The SWOT Analysis Concept	17
2.3.3	The SWOT Matrix Concept	18
2.4	The TAM Model Concept	1
2.4.1	The TAM Model Definition	18
2.4.2	The TAM Model Framework Concept	19
2.5	Case Studies	22
2.5.1	The Government Level	23
2.5.1.1	e-Government in Singapore	23
2.5.1.2	Republic of Estonia (e-Estonia)	27
2.5.1.3	e-Government in Kingdom of Saudi Arabia (KSA)	31
2.5.1.4	e-Government in Egypt	35
2.5.2	The Municipal Level	41
2.5.2.1	Local e-Government in United Kingdom (UK)	41
2.5.2.2	Kuusamo e-Municipality (Finland)	44
2.5.2.3	e-Municipality in Greater Amman (Jordan)	47
2.5.2.4	Dubai e-Municipality (United Arab Emirates)	51
2.6	Conclusion	54

	Chapter Three: Research Methodology	57
3.1	Introduction	57
3.2	Research Methodological Approach	57
3.2.1	Quantitative Research	58
3.2.2	Qualitative Research	59
3.2.3	Mixed Research	60
3.3	Type of Sampling	63
3.4	Data Collection Method	65
3.4.1	Interview Design	66
3.4.1.1	Transcription and Translation	68
3.4.2	Questionnaire Design	69
3.4.2.1	Pilot Test	71
3.5	Data Analysis	73
3.6	Validity and Reliability	75
3.7	Conclusion	76
	Chapter Four: The E-Municipality In Palestinian Municipalities	77
4.1	Introduction	77
4.2	The Local e-Government in Palestine	78
4.2.1	Historical Background	78
4.2.2	Local e-Government Objectives	80
4.3	The Requirements of the e-Municipality in Palestine	81
4.4	Methodology of Transformation and General Features of Application e-Municipality	85
4.5	Conclusion	87
	Chapter Five: Conceptual Model and Research Hypotheses	89
5.1	Introduction	89
5.2	The Conceptual Model	89
5.2.1	Proposing Model for e-Municipality in Palestine	89
5.3	Hypotheses Development	96
5.4	Conclusion	100
	Charter Six: Research Data Analysis	101
6.1	Introduction	101
6.2	Quantitative Analysis	102
6.2.1	Demographic Analysis	102
6.2.2	Measurement Model: reliability and validity analysis	104
6.2.2.1	Reliability Analysis	104
6.2.2.2	Validity Test	105
6.2.3	Hypothesis Testing	108
6.3	Qualitative Analysis	115

6.3.1	Qualitative Analysis: Interviews	118
6.3.2	Qualitative Analysis: Questionnaires and Municipalities Websites	120
6.3.2.1	Ramallah Municipality	122
6.3.2.2	Hebron Municipality	125
6.3.2.3	Nablus Municipality	128
6.3.2.4	Bethlehem Municipality	129
6.3.2.5	Dura Municipality	131
6.3.2.6	Salfeet Municipality	133
6.3.2.7	Beit Jala Municipality	135
6.3.2.8	Halhoul Municipality	137
6.3.2.9	Jenin Municipality	139
6.3.3	Overall Assessment of the Studies Municipalities	140
6.4	Conclusion	141
	Chapter Seven: Strategic Analysis For E-Municipality Initiative	143
7.1	Introduction	143
7.2	SWOT Analysis	143
7.2.1	The Strengths	144
7.2.2	The Weakness	145
7.2.3	The Opportunities	147
7.2.4	The Threats	149
7.3	The Key Issues and General Challenges for Implementing e-Municipality	150
7.3.1	Management Challenges	150
7.3.2	Technical Challenges	152
7.3.3	Legal Challenges	153
7.4	The Main Objectives of e-Municipality Initiative	153
7.5	Critical Success Factor for e-Municipality Initiative	154
7.6	Lessons Learned from the Implementation of the e-Municipality Initiative	156
7.7	Conclusion	159
	CHAPTER Eight: Developing of Strategic Framework For The Implementation of E-Municipality Initiative	161
8.1	Introduction	161
8.2	The Assessment of the Followed Strategies	162
8.3	SWOT Matrix	167
8.4	Proposed Strategies to Overcome the Challenges Facing the Implementation of the e-Municipality	182
8.5	Conclusion	190

	Chapter Nine: Conclusions and Recommendations	191
9.1	Summary	191
9.2	Conclusions	192
9.3	Recommendations	196
9.4	Limitations	198
	References	199
	Appendix's	215
	A: Names of Interviewees	215
	B: Questionnaire (Arabic)	216
	المخلص	ب

List of Tables

No	Title	Page
Table 2.1	TAM Model Variable and Conceptualization	22
Table 3.1	The Key Typical Differences between Qualitative and Quantitative Research Approaches	62
Table 5.1	Constructs/Variables, the Questionnaire Item No. and Sources	93
Table 6.1	Demographic Characteristics	103
Table 6.2	Reliability Results	105
Table 6.3	Correlation Matrix Result (Internal Consistency)	106
Table 6.4	Correlation Matrix Result (Construct Validity)	107
Table 6.5	Hypothesis Testing Results on Attitude towards e-Municipality	110
Table 6.6	Hypothesis Testing Result for H7	113
Table 6.7	Conclusion of the Research Hypothesis	114
Table 6.8	Conclusion the e-Municipality Level	141
Table 8.1	SWOT Matrix: Strategies to Achieve Implementation of the e-Municipality	167

LIST OF Figures

No	Title	Page
Figure 1.1	Research Approach	7
Figure 2.1	TAM Model by Davis (1989)	21
Figure 5.1	The Proposed Research Model and Hypotheses	92
Figure 6.1	Hypothesis Result for Conceptual Model	115

List of Acronyms

ATT	Attitude Towards Technology
ATU	Attitude Toward Usage
APLA	Palestinian Association of Local Authorities
BI	Behavioral Intention
CSE	Computer Self Efficacy
DM	Dubai Municipality
E-government	Electronic Government
E-services	Electronic Services
E-signature	Electronic Signature
EMS	Electronic Municipality System
E-local government	Electronic Local Government
E-payment	Electronic Payment
FC	Facilitating Condition
GIS	Geographic Information System
HOPE	Home Of Palestinian Expertise
ICT	Information and Communication Technology
IDeA	Improvement and Development Agency (Finland)
IS	Information Systems
IT	Information Technology
KSA	Kingdom of Saudi Arabia
MCIT	Ministry of Communication and Information Technology (Egypt)
MDLF	Municipal Development and Lending Fund
MOLG	Ministry of Local Government
MSAD	Ministry of State for Administrative Development (Egypt)
MTIT	Ministry of Telecommunication and Information Technology
NCD	National Center for Sustainable Development
OECD	Organization for Economic Co-operation and Development (in Finland)
OSG	One Stop Government
OSS	One Stop Shop
RCS	Public Center Services
PEOU	Perceived Ease-of-Use
PMA	Palestinian Monetary Authority
PU	Perceived Usefulness
SA	Saudi Arabia
SN	Subjective Norm

SOWT	Strengths-Weaknesses-Opportunities-Threats
SO	Strengths-Opportunities
ST	Strengths-Threats
TAM	Technology Acceptance Model
UK	United Kingdom
UN	United Nations
WAN	Wide Area Network
WO	Weaknesses-Opportunities
WT	Weaknesses-Threats

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Abstract

E-government is one of the tools that have emerged from the significant development in the Information and Communication Technology sector. E-municipality is one of the e-government systems that help municipalities to provide services efficiently and effectively via electronic means (Internet, computer, mobile, etc.) to the citizens.

Palestine has paid great attention to the e-government and developed a national strategy to achieve it. Many Palestinian municipalities have started the transformation towards e-municipality, but experienced challenges that might have exceeded their potential.

This study has addressed the need for the assessment of application of e-municipality, including the readiness, acceptance and adoption of e-municipality initiative in local government bodies, and identification challenges related to e-municipality development and implementation, to developing strategies to meet the challenges that hinder the optimal application of the e-municipality.

The objective of the study is achieved by reviewing and evaluating the strategic framework developed for the Palestinian e-municipality, through SWOT analysis, in addition to assessing the readiness, acceptance and adoption the e-municipality in the Palestinian municipalities using the TAM model. This has relied on information collected through documents, interviews with experts from the Palestinian institutions, as well as the questionnaires distribution in Palestinian municipalities.

The findings for this research indicate that the TAM model has assisted in identifying the perceived usefulness, perceived ease of use, level of technology use and availability, administrative and management support, level of e-services, availability of laws and legislation and attitude towards of e-municipality that affect the transformation towards e-municipality. In addition, the matching process between the internal and external factors for e-municipality in the Palestinian municipalities, expressed through the developed SWOT matrix, has assisted in formulating a set of strategies that are proposed to meet the challenges facing the optimal application of the e-municipality.

Chapter One

Introduction

1.1 Introduction

The many technologies of Information and Communication Technologies (ICT), especially in the last century, have affected all fields of life and the accessibility of information anywhere and anytime. The rapid access to information through the Internet, computers, mobile phones and many other means of communication and technology has been facilitated, leading to huge development changes. This has affected the emergence of new concepts that the world has never experienced before, from the information revolution to the digital era, globalization, electronic commerce, and the electronic government, whether on the central or municipal level. Besides, the ICT has been used to update the government itself and increase its competitiveness. The government agencies and public sector institutions began to adopt the concepts of electronic business to accomplish their activities and to provide services to citizens. The huge developments had affected the government, and the transformation of the performance of its work from the traditional way to follow an electronic style, and had resulted in what is called as electronic government (e-government).

Each government seeks to provide the best services to its citizens for efficiency and acceptable performance. This goal can be achieved by improving the performance of services for entire sectors of society. Billions

of dollars have been invested by governments to take their first step towards the implementation of the e-government initiatives.

Chen et al., (2006) defined e-government as a cost-effective solution that works to improve communication between the government and its components by providing access to information and services via the Internet. There is also a constant commitment by the government to improve the relationship between the private and public sectors by enhancing the provision of information and services in a cost-effective and efficient manner. Furthermore, as Huang et al. (2005) indicated, e-government is one of the aspects of public administration related to the functions of the executive authority. According to Mahizhnan and Andiappan (2002), the term "e-government" is used to refer to the concept of the use of ICT as a means of organizing and managing the administrative processes of the government, especially the interactive processes between the government and the public. In summary, e-government can be summed up in the administration's interaction with its citizens.

As for e-municipality, it is considered as a subsystem of e-government, which aims at facilitating the provision of services and information to citizens, and through which the efficiency of performance and services provided in municipalities is raised. E-municipality supports citizens' interaction with their local governments via the internet to enable them to access services online effectively and efficiently, as well as to see their data and the status of services they seek more easily. In addition, the e-

municipality employs the internet to provide information to citizens and to promote the exchange of knowledge and the foundations of awareness and accountability through the provision of services.

The recently developed E-municipality Strategic Framework can be considered as the cornerstone for the successful implementation of the e-municipality in the Palestinian municipalities (Ministry of Local Government, 2018a). Therefore, the strategic framework can be used as a reference to measure the extent of e-municipality implementation in these municipalities and for monitoring and continuous evaluation.

This thesis focuses on evaluating the extent of adoption and acceptance of the e-municipality, as well as studying the challenges and obstacles related to the e-municipality, the lessons learned from the successful e-municipality model in Palestine, and identifying ways to overcome the challenges facing the different municipalities.

1.2 Significance of the Study

E-municipality in Palestine is the focus of this research. The already developed strategic framework of e-local government is the basis for advancement of e-municipalities, where it defines the methodologies and procedures necessary to achieve the strategic goals of e-municipality. Therefore, the strategic framework should be as a reference for assessment.

The municipalities' use e-municipality tools (such as; portal websites, e-services and e-payment) as a modern means of management, linking its departments to each other, and linking its various services to private institutions and the general public. The main aspect of the research is that it focuses on e-local government in Palestine, precisely the evaluation of the strategic framework implementation in the Palestinian municipalities, evaluation of the acceptance and adoption of e-municipalities, and the study of the challenges and obstacles related to the e-municipality that may have hindered the success and development of e-municipality in the Palestinian municipalities. This research is expected to have a positive impact on community development, and on continuous evaluation of the achievement related to the indicated strategic planning framework.

This research will highlight the evaluation of acceptance, adoption and implementation of the e-municipalities in Palestine using Technology Acceptance Model (TAM), the obstacles and challenges that hinder the strategies of development and application of e-municipality in Palestinian municipalities, as well as the identification of the best strategies for the development of e-municipalities as a means to improve performance and service delivery in Palestinian municipalities.

1.3 Problem Statement

The development of e-municipality is one of the important aspects of e-government in the ICT sector in the world in general, and in Palestine in particular (Abu Jaber, 2011). There have been applications of strategies related to the e-municipality, but there is no assessment for acceptance and adoption of the e-municipality, as it is noticed that there is failure in the application of e-municipality in a number of Palestinian municipalities due to the existence of challenges that were not overcome. Therefore, there is need for continuous improvement of the e-municipality on the light of the developed strategic framework. Also, there is need to identify the obstacles that prevent the activation of the e-municipality at the national and municipal levels in order to achieve the optimal use of local e-government and benefits for the improvement of the situation of the ICT sector.

1.3.1 Research Questions

As derived from the problem statement, this research is designed to answer the following questions:

1. Are the Palestinian municipalities ready to accept and adopt the e-municipality system?
2. How far did the Palestinian municipalities accomplish in implementing the e-municipality system?

3. What are the challenges that impede the implementation of the e-municipality in Palestine, and what are the lessons learned from the implementation attempts of the e-municipality?
4. How can the Palestinian municipalities overcome the challenges and obstacles facing the implementation and development of the e-municipality?

1.4 Objectives of the Study

This research aims at assessing the acceptance, readiness, adoption and current status of the e-municipality in the Palestinian municipalities. Specific objectives of this research include:

1. Analyzing and evaluating the current status of the Palestinian e-municipality, and acquaintance with the most important achievements in the field of e-municipality.
2. Studying and evaluating the readiness of the Palestinian municipalities, and the acceptance and adoption of the e-municipality system.
3. Presenting the achievements and failures of the e-municipality in the Palestinian municipalities.
4. Identifying the obstacles facing the Palestinian municipalities in becoming e-municipalities.

5. Proposing strategies and the framework for the implementation of e-municipalities in Palestinian municipalities, including those to overcome the identified obstacles.

1.5 Research Approach

The design of the research is the conceptual schema through which the research is conducted, and the outline of the collection, measurement and analysis of the data (Akhtar, 2016). The researchers who undertake any kind of research to guide themselves during the study process always need detailed plans. The research plan consists of three main steps: the defining and designing phase, data collection phase, and finally, the analysis/conclusions phase, as illustrated in Figure 1.1.

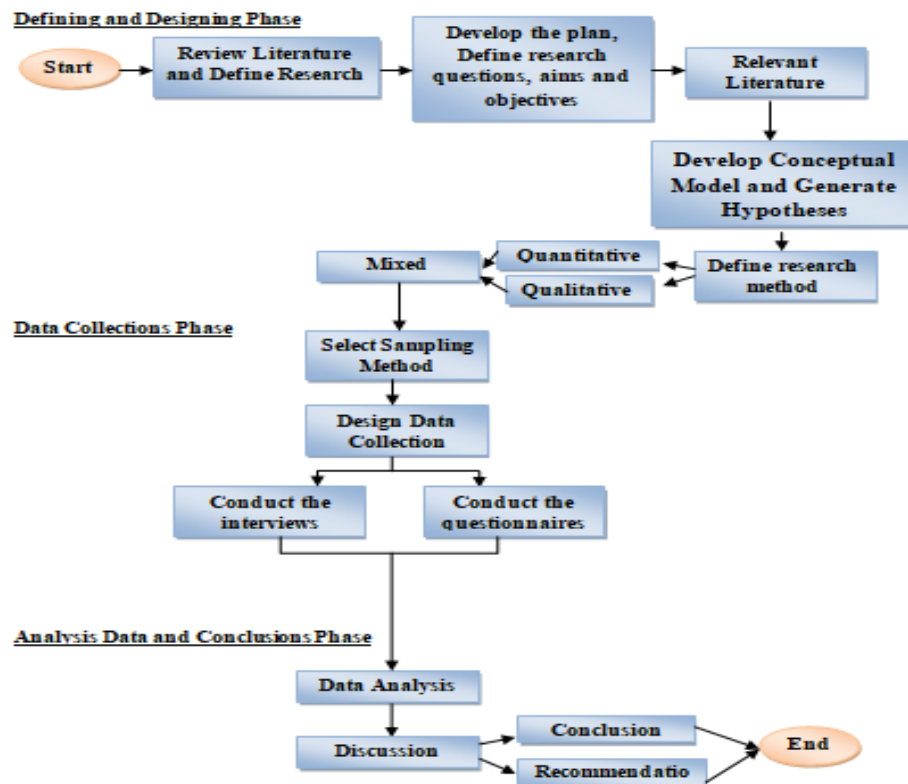


Figure 1.1: Research Approach

In the definition and design phase, literature is reviewed on e-municipality. In addition, the research problem, research questions, significance of the study, and aims and objectives are defined; the hypotheses are generated; and the research methods are identified.

The second phase of the research is the data collection, which deals with the selection of the sample and data collection methods, as well as questionnaires and interview questions, and conducting the process of the data collection.

The third phase encompasses the research data analysis and conclusions, which are produced as outcome of the analysis of the results carried out on the questionnaire and interviews. This last phase is to close the loop, and verifies and checks the validity of the results.

1.6 Thesis Structure

This thesis is divided into nine chapters. The initial chapters offer background to the study and present an overview of the research aim, objectives and the theories related to the study. The later chapters illustrate how the study was conducted, whilst the final chapters provide an analysis of the information gathered, and display the results and conclusions of the study.

The contents of the rest of this research are summarized as follows:

Chapter 1 presents background information and the purpose of this research along with the main objectives of the study, and how this research can help and/or contribute. This chapter pinpoints the problem addressed and explains how it is significant. The overall structure of the thesis is also discussed in this chapter.

Chapter 2 clarifies the concept, importance, benefits, and duties of e-municipality and strategy. In addition, a set of case studies on the strategic framework of the e-municipality were presented at the international and Arab countries levels. It presents the extent of readiness, acceptance and adoption of these municipalities and the challenges faced by the application of e-municipality.

Chapter 3 outlines the methodology followed in the study. It presents the mixed methodology adopted (quantitative and qualitative research). Besides, it presents the data collection methods and data analysis methodology and tools used.

Chapter 4 introduces a general overview of e-municipality in Palestine in terms of the objectives and requirements. In addition, it presents the transformation and general features of the application of the e-municipality initiative in the municipalities, illustrating the current status and the experiences of the Palestinian municipalities in the implementation of the

e-municipality, and the extent of their readiness, acceptance and adoption of the e-municipality within the municipality.

Chapter 5 aims at developing a conceptual model that demonstrates the acceptance and adoption of e-municipality, based mainly on the TAM model. In addition, it presents the development and formulation of hypotheses related to the study and its objectives.

Chapter 6 deals with the quantitative and qualitative analysis of data gathered through the questionnaires and interviews, and the transformation the raw data into meaningful results.

Chapter 7 discusses the main issues and general challenges facing the optimal implementation of e-municipal initiatives in the Palestinian municipalities. In addition, it defines the strategic objectives to be reached to implement the e-municipality and the critical success factors to implement of the e-municipality.

Chapter 8 presents the proposed strategies to the challenges facing the optimal implementation of the e-municipality at the Palestinian municipalities through a strategic framework.

Chapter 9 presents the study's summary, conclusions, recommendations, and the limitations of the study.

Chapter Two

E-Municipality Literature Review

2.1 Introduction

As previously mentioned in Chapter 1, the aim of this research is to evaluate to acceptance, adoption and implementation of the e-municipalities in Palestine, in addition to clarifying the obstacles and challenges that hinder the strategies of development and application of e-municipality in Palestinian municipalities. It also aims to identify of the best strategies for the development of e-municipalities as a means to improve performance and services in Palestinian municipalities. The main concern of this chapter is to provide needed background and information to understand the research subjects, and to presents a review of relevant literature.

This chapter firstly presents definitions and concepts for e-municipality. Secondly, it outlines the benefits and duties of e-municipality. Thirdly, it clarifies concept of strategy, SWOT Analysis, SWOT Matrix, and TAM model. Finally, this chapter presents a set of case studies for e-municipality in Arab and other countries.

2.2 The Concept of e-Municipality

2.2.1 Definition of e-Municipality

This section, presents a set of views related to the concept e-municipality and its objectives. The e-municipality plays an important role in representing the interests of the citizens, and providing local services more efficiently and effectively.

The e-municipality is a subsystem of e-government which aims at changing the way local officials interact with the local community, and where local governments do their works and duties more effectively (Bojang & Bwando, 2018).

In general, the major principle of e-municipality is to provide opportunities to improve the quality of services which are provided to citizens. The adoption and implementation e-municipality will significantly improve the municipality's presence, including streamlining the provision of services to citizens and removing the layers of municipal management. These are achieved through integrating and eliminating redundant systems and streamlining municipality operations to guarantee rapid response to citizens' need (Huang et al ., 2005).

The e-municipality is a system that provides services quickly, availably, and safely in the field of municipality duties to citizens. The services of this municipality are around the clock and free of timely and spatial restrictions in a city (Layne & Lee, 2001).

According to Akman et al. (2013), the e-municipality is a leading organization that shares a large form of data processing and exchanging with the general public for easier and cheaper services. Likewise, the E-governance Academy (2018) states that local e-government is the closest government unit to citizens in a country and provides the majority of public services to them. E-services are the product of e-government that helps to regulate communications between public authorities, local governments and citizens efficiently. The e-municipalities is a sophisticated and relatively new system in the administration through which the administrative efficiency and level of performance are intended to be raised, and the working environment to be improved to facilitate all the services and business provided by local government institutions for citizens. Under it, this system enables the citizen to complete government transactions and work through electronic means quickly with high efficiency (Sure, 2018).

According to (Köylüoğlu et al., 2013), the e-municipality is that modern local governments satisfy social demands pertaining to citizens from the provision of services through the principles of efficiency, effectiveness, speed, accountability and administrative audit. Moving to the local e-government system by providing its services in an electronic environment leads to positive results for employees and citizens.

In summary, the local e-government (e-municipality) is a modern and new system, based on providing all the services of the municipality in an electronic environment including access to the Internet and provides an electronic portal especially in the municipality. It also provides services efficiently, effectively, and quickly leading to high performance, and saving time and effort on employees and citizens. In addition, it seeks to make optimal and effective use of ICT in order to improve services and provide them in a better way for beneficiaries. In addition, it is based on improving the work environment and eliminating the administrative layers, as it is an administrative method to improve the work environment and provide better services.

2.2.2 Benefits and Duties of e-Municipality

Municipalities are recognized as one of the key elements of governments to provide satisfactory services to the people. Public administration is an area that enables compliance with ongoing changes and constant innovation at all stages of the globalization process. National governments and local level governments have paid great attention to the importance of ICTs and how they can help transform business performance electronically. For local administrations, the provision of local services in the e-environment means interaction with state institutions and institutions, private sector institutions and citizens through IT. Within municipal activities where personal satisfaction depends heavily on the quality of services provided, the flow of information, interaction, and private sector institutions, individuals and

local management units can be implemented more efficiently with the help of IT among local government units. Municipalities have important tasks to meet local needs, which are significant in the local government system. Municipalities are the leading institutions responsible for providing services to citizens living in urban areas. Municipal activities are defined by regulations through urban planning, building, transport, infrastructure and mapping (Bojang & Bwando, 2018).

According to Mowaffak (2015), the e-municipality realizes that the world today is advanced and developed. The e-local government is distinguished by availability of several basic conditions which are accountability, transparency and good governance. The importance of e-municipality is highlighted by the benefits of its application as follows:

- 1) Economic benefits, by providing money, time, and effort savings to all parties dealing with the e-municipality compared to the traditional way, and by providing new job opportunities in many areas such as data entry, operation and maintenance of the infrastructure of the e-municipality.
- 2) Administrative benefits, through the organization of processes and improvement of the performance of the functions, the administration in the e-municipality is than more transparent in dealing with the citizens.
- 3) Social benefits, by motivating citizens to use the e-municipality and thus creating an information society capable of dealing with technical works.

In order to overcome the burden on the citizens and institutions, an e-services framework for the local municipalities was examined to provide municipal services through the Internet and to collect fees and taxes electronically in cooperation with the local banks. This is in addition to improving the citizens relations with the municipality in order to follow up their complaints and meet their needs electronically (Mowaffak, 2015).

2.3 The Concepts of Strategy

2.3.1 Strategy Definition

The term strategy came from the ancient terms derived from the Greek word “stratēgia” meaning the army or the military crowd, and it has used in military and adopted later in business.

Various definitions for strategy term were identified and introduced from different point of views.

One of the most frequently used terminology in politics and business is “strategy”, as it refers to a long-term plan that aims at achieving the goals of the organization. The strategy is to choose the day that will affect the results of tomorrow. Successful strategists make plans and policies to reach their goals and what they aspire to, because it is well known that planning organizations reach their goals as well as maintain them, in contrast to companies and organization that do not give strategic planning any importance (David et al., 2011).

The strategy refers to a general plan of action to achieve one's goals and objectives. A general strategy or plan of action can be formulated for long-term general goals and objectives, for more specific business unit objectives or objectives, or for a functional unit, even if it is a small unit (Nickols, 2011).

From the above mentioned definitions, the strategy is found to be a term that refers to a set of ideas, plans of actions, procedures and methodologies that help to achieve a set of intended goals. The strategy reflects predefined plans to achieve particular long-term or short-term goals. Furthermore, strategy helps decision makers to take the right decisions based on a set of plans to achieve envisaged results.

2.3.2 The SWOT Analysis Concept

SWOT Analysis as indicated by Sammut-Bonnici and Galea (2015) is a tool, that uses the organization's knowledge of its internal and external environments to formulate strategies accordingly. SWOT analyses internal strengths and weaknesses, opportunities and external threats in the organizations environment.

SWOT analysis refers to a framework to assist researchers or planners to identify and prioritize business objectives, and to further define strategies for their achievement, a technique used to analyze the strengths, weaknesses, opportunities and threats of public and private firms (Ommani, 2011).

2.3.3 The SWOT Matrix Concept

David et al. (2011) defined the Strengths-Weaknesses-Opportunities-Threats (SWOT) Matrix as "an important matching tool that helps managers develop four types of strategic solutions: SO (strengths-opportunities) Strategies, WO (weaknesses-opportunities) Strategies, ST (strengths- threats) Strategies, and WT (weaknesses-threats) Strategies. Matching key external and internal factors is the most difficult part of developing a SWOT Matrix and requires good judgment, as there is no one best set of matches."

In this research, SWOT analysis and SWOT matrix was used to generate strategies to overcome the challenges and issues facing the proper implementation of the e-municipality.

2.4 The TAM Model Concept

2.4.1 The TAM Model Definition

The TAM was developed by Davis (1989) refers to the technology acceptance model, which is one of the most popular search models to predict use and acceptance of information systems and technologies by individual users. TAM has been extensively studied and verified through various studies examining the acceptance behavior of individual technical information systems in various constructs (TAM model elements). In TAM model, there are two factors perceived usefulness and perceived ease of use is relevant in computer use behaviors (Surendran, 2012).

According to Hassan and Meliji (2017), the TAM model is an information systems theory that explains how to accept users and use technology. The model suggests that when a user is introduced to new technology, a number of factors will influence the decision about how and when to use it. According to this model, the behavior of the use of the information system can be explained by the behavioral intentions that are formed as a result of conscious decision-making.

In this research, population of the sample was drawn from municipal management or staff involved in e-municipality, i.e., individuals who deal with e-municipality.

2.4.2 The TAM Model Framework Concept

In the TAM model, there are two factors, perceived usefulness and perceived ease of use, which are relevant in computer use behaviors. Davis defines perceived usefulness as the prospective user's subjective probability that using a specific application system will enhance his or her job or life performance. Ease of use can be defined as the degree to which a potential user expects the target system to be effortless. According to TAM, ease of use and perceived benefit are the most important determinants of actual system use. These two factors are influenced by external variables (Surendran, 2012).

The TAM model, which deals with perceptions rather than real use, suggests that when new technology is introduced to users, the important factors affect their decision about how and when they will use them. These key factors, presented in Figure (2.1), are as follows (Omwansa et al., 2012).

- **Perceived Usefulness (PU):** This was defined by Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance"⁽¹⁾.
- **Perceived Ease-of-Use (PEOU):** Davis defined this as "the degree to which a person believes that using a particular system would be free from effort"⁽²⁾.
- **Attitude Toward Usage (ATU):** This variable is defined "as an individual's positive or negative feelings (evaluating affect) about performing the target behavior"⁽³⁾. The attitude towards use has been identified as a factor that directs future behavior or the cause of intent that eventually leads to a particular behavior. This variable would affect the actual use or acceptance of a computer system or technology (Abu et al., 2013).

⁽¹⁾ (Omwansa et al., 2012, p.33).

⁽²⁾ (Omwansa et al., 2012, p.33).

⁽³⁾ (Abu et al., 2013, p.5).

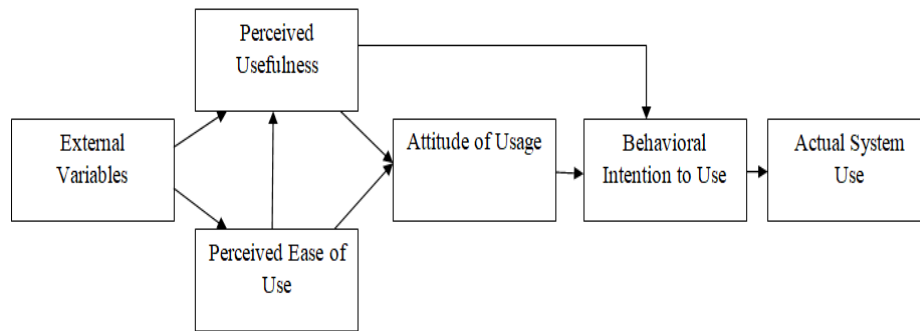


Figure 2.1: TAM model by Davis (1989) Sources: (Abu et al., 2014)

The TAM Model includes the basic variables of user motivation (i.e., perceived ease of use, perceived usefulness, attitudes toward technology) and outcome variables (i.e., behavioral intentions, use of technology), as presented in Table (2.1). PU and PEOU are key variables that explain outcomes directly or indirectly. These variables are often accompanied by external variables that explain the variance in perceived interest and ease of use. In general, PU and PEOU, the most important factors in TAM, refer to the degrees to which a person believes that using technology would be free from effort (PEOU) and that the use of technology will enhance the performance of their function or task (PU). Finally, external variables in TAM indicate perceptions of how important is the use of technology, perceptions of the ability to master computer or technology tasks and organizational support for the use of technology (Scherer et al., 2019).

In summary, the TAM model explains and clarifies the user's acceptance of new technology and how a combination of factors will influence his/her decisions.

Table2.1: TAM Model Variable and Conceptualization

TAM variable	Conceptualization
TAM-core variables	
Perceived Ease of Use (PEOU)	“The degree to which a person believes that using technology would be free of effort”.
Perceived Usefulness (PU)	“The degree to which a person believes that using technology would enhance his or her job performance”.
Attitudes Toward Technology (ATT)	Evaluate a person's specific technology or behavior associated with the use of technology.
Outcome variables	
Behavioral Intention (BI)	A person's intention to use technology.
Technology use (USE)	A person's actual technology use.
External variables	
Subjective Norm (SN)	“A person's perception that most people who are important to him or her think he or she should or should not perform the behavior in question”
Computer Self-Efficacy (CSE)	The degree to which a person believes he\she can perform a specific mission using a computer.
Facilitating Conditions (FC)	The degree to which a person believes that organizational and technical resources exist to support the use of technology.

2.5 Case Studies

In this section, eight world and Arab region case studies that have concepts related to providing their services electronically are presented, starting with government level (Singapore, Estonia, Kingdom of Saudi Arabia and Egypt), and ending with the municipal level (Local e-Government in United Kingdom, Kuusamo Municipality in Finland, Greater Amman Municipality in Jordan, Dubai Municipality in United Arab Emirates, and Muscat Municipality in Sultanate Oman), to determine the acceptance and adoption of technology and its systems within municipalities. In addition, this section illustrates the provision and evaluation of the strategic frameworks and the identification of the challenges faced by the

application and implementation of the electronic system, and the lessons learned from them.

2.5.1 The Government Level

2.5.1.1 e-Government in Singapore

Singapore is an Asian country/city that does not have many resources or a large population, but the technological level is advanced, and it has the acceptance and adoption of e-government and its tools. Since the 1980s, it has been working on modernizing e-government through several directives to develop and modernize e-government (Center for e-Government Studies, 2014). Singapore has come a long way in e-government efforts. However, the adoption of the e-government and the usage of technology and communications have not been seen as an end in itself, but rather as a means to achieve the goal to reinvent the government and serve the customers and citizens in the best way possible (Info-comm. Development Authority of Singapore, 2010).

➤ e-Government Strategy

The Vision

“Collaborative Government to facilitate more co-creation and interaction between the government, the people and the private sector to bring about

greater value creation for Singapore and its people^{”(4)} (Hanna & Knight, 2012).

Thrusts of Strategic Action Plan

In order to reach the vision of Singapore's cooperative government, it is necessary to look at the thrusts of strategic action plan (Hanna & Knight, 2012), which include:

1. To create greater value, where customers are enabled to participate in the creation of new e-services with the government.
2. Linkage to effective participation, where citizens are informed and involved in the government in national policies.
3. Stimulate government transformation as a whole, where the entire government cooperation is enhanced through innovative and sustainable technologies.

➤ The Readiness, Acceptance and Adoption of Singapore's e-Government

In the case of Singapore, the advent of e-government has its origins in the Government's decision to computerize the civil service in 1981. However, had it been an isolated development focused solely on the civil service, e-government in Singapore today reached the level it possessed. Singapore's e-government movement has become an integral part of a

⁽⁴⁾ (Hanna & Knight, 2012, p50).

larger national strategy to transform a country into a "smart state". It's important to note that simple technical knowledge of ICTs will be totally inadequate to start e-government. There was therefore a need for capacity-building, identification of service providers and users, and public acceptance before the e-government becomes common (Mahizhnan & Andiappan, 2002).

Singapore is a success story in harnessing the technologically advanced revolution despite its limited natural resources and initial economic conditions, but Singapore has a good technological readiness to take advantage of its systems and programs to acceptance and adoption electronic systems within its institutions. ICT applications in the public or government sector have been planned and developed with the support of enabling components: information infrastructure, information technology literacy and capacity development (human resources for ICT), capacity development, stakeholder transformation and adoption, and governance (Hanna & Knight, 2012).

➤ **The Challenges Faced by e-Government in Singapore**

As explained by Su Iyze, Head of the Government Main Information Office at the Singapore Telecommunications and Information Development Authority, the main challenges faced by e-government include speed, ease of use and knowledge of information, and the population's expectation to have access to effective and fast services. Therefore, the challenges of the e-government lies in "how to continue to improve to meet demands, not

just to develop services, but also to be rapid, effective and responsive to the population's expectations" (Slman, 2010).

➤ **The Lessons Learned from e-Government in Singapore**

Singapore offers a wide variety of integrated online services. By the end of 2001, Singapore had access to 92% of all public services offered online. The success of Singapore can be attributed to the commitment and persistence of its government in transforming a promising vision into reality, and perhaps even more importantly, into the strategies it has adopted. From the experience of Singapore, several lessons may be drawn. Firstly, strong leadership with vision is crucial to government success; the government must clearly define its vision of e-government and motivate all stakeholders to share this vision. Secondly, the government should pursue e-government by developing an information infrastructure and bridging the digital divide. Thirdly, strong political will to provide integrated citizen services must be consistent with coordination measures, in addition to the formation of various coordinating committees. The Government has regularly organized various political forums and gatherings to promote a culture of knowledge exchange and facilitate open communications between agencies. At the same time, the government has used a common e-service infrastructure (Ke & Wei., 2004).

2.5.1.2 Republic of Estonia (e-Estonia)

Estonia may be the only country in the world where 99% of public services are available online. When Estonia began building the information society about two decades ago, there was no digital data collected from its citizens. There was no Internet or hardware used by the general public. E-government has been the strategic choice for Estonia to improve the competitiveness of the state, and to increase the well-being of its people. The efficiency of e-government is clearly expressed in terms of working time saved by citizens and officials (E-estonia, 2015).

The most powerful tools in building e-Estonia are the integrated e-services of Estonia. The e-Estonia component system is very flexible and allows the easy addition of e-services in the future, to the development of the government system more than ever before. The main elements in e-Estonia are the Estonian electronic ID card, X-Road and the Estonian State Portal. The ID card enables authentication and use of secure e-services. X-Road is the backbone of the e-state that maintains various e-service databases in a single system, the state portal that links all e-services available in one site (Juurikas, 2015).

➤ e-Government Strategy

The Vision

“In Estonia, the possibilities of information and communications technology (ICT) are used to full extent in cooperation between the public,

private and third sectors: in order to improve the quality of life for people, increase the employment rate, ensure the viability of Estonian cultural space, increase productivity in the economy, and make the public sector more efficient”⁽⁵⁾ (Ministry of Economic Affairs and Communications, 2014).

The Action Plan

The Information Society Strategy 2020 addressed the introduction of information and communication technologies in various areas of life. The highest objective is to support the competitiveness of the economy through ICT, human well-being and the efficiency of the state government (European Commission, 2016). The ICT strategy includes a number of necessary steps:

1. Setting up a ready-made high-speed internet base to allow 60% of the population to use the Internet on a daily basis.
2. Enhancing the capacity of cross-border electronic services in cooperation with the Nordic Institute of Creativity with the aim of developing X- road, electronic identities and electronic signatures. By 2020, 20% of the population will use an electronic signature.
3. Provide people with technical and regulatory infrastructure to control the use of data at any time who, why, how, and how such data is used by their governments.

⁽⁵⁾(Ministry of Economic Affairs and Communications, 2014, p15)

4. Modernization of Estonian public electronic services, implementation of standardized quality standards and support for the reform of old IT solutions.

5. Launch a virtual or electronic residence by issuing a digital ID to non-residents and providing electronic services.

➤ The Readiness, Acceptance and Adoption of Estonia's e-Government

Estonia's use of modern information and communications technologies in the public sector and governance has placed the country at the forefront of countries that aim to modernize its public sector and provide transparent governance. Estonia's success in converting their public services online is first and foremost based on the widespread use of electronic identification cards (Vassil, 2015). According to Kitsing (2011). In the case of Estonia, the roots of e-government are based on several interpretations of some of the decisions taken by the main officials that formed the development of e-government in Estonia in the early 1990s. One of the most important variables that helped in this is the readiness of information technology, which helped implement the X-Road system, government databases communicate with each other; in addition to the role of politicians and public sector officials and their interaction with the e-government initiative.

According to Kalvet (2012), the success factors in the Estonian e-government that helped to adopt and accept e-government in Estonia so far have been the following: leadership and public sector competencies, adequate funding, legislative and regulatory support, development of (strategic) information technology infrastructure, public/private partnerships, and private sector competencies.

➤ **The Challenges Faced by e-Government in Estonia**

The Estonian government is the most distinctive model in Central and Eastern Europe. Despite the high rating of Estonia in the implementation of e-government between the countries of Central and Eastern Europe, which was revealed by many indicators, some studies indicate that there is a gap between the official indicators of the performance of e-government and the actual practice of e-government is clear, through the analysis and submission of some examples of online services as well as the coordination of information technology within the government. That is not a sign of its failure, but to draw attention to the fact that the actual e-government practices are much more heterogeneous than what some aggregated indicators would suggest (Kitsing, 2014).

➤ **The Lessons Learned from e-Government in Estonia**

Through its e-Estonia's initiative, Estonia has developed a digital community and built the most technologically advanced government in the world. As a result, Estonia relies heavily on the information systems and

data stored. One of the most important lessons learned according to Estonia's officials is the importance of finding partners who are equally thinking, enthusiastic about innovation, with which mutual trust exists or can be cultivated (Collins & Farm, 2018).

2.5.1.3 e-Government in Kingdom of Saudi Arabia (KSA)

The Government of Saudi Arabia has considers e-government a top priority and attaches great importance to the concept of e-government and the process of transformation that leads to it (Basamh & Qudaih, 2014). The extensive use of technology by the Government of Saudi Arabia is poised to embrace a new technological era, one in which technology is utilized as a tool to maximize the exposure of information, services, communication and opportunities. This technology, popularly referred to as e-government, has contributed significantly to the management of the state machinery more importantly and has emerged as an efficient and effective tool for the people (Khan et al., 2013).

According to Al-Sobhi & Weerakkody (2010), the Government of KSA started implementing a national e-government program in 1998. Also, the Government of Saudi Arabia had begun the process of implementing its concept of e-government, which is referred to as "Yesser" - an umbrella and government observer of all actions, activities, legislation and all other issues and actions related to it (Al Nagi & Hamdan, 2009). The vision aimed at that the in the end of 2010, everyone in the kingdom will be able to enjoy – from anywhere and at any time – world class government

services offered in a seamless, user friendly and secure way by utilizing a variety of electronic means (Alsheha, 2007).

➤ **e-Government Strategy**

The Vision

According to Khan et al., (2013), Yesser's program vision is based on providing easy access to operators, including individuals, companies, government agencies and employees. It says; "Enabling everyone to use effective government services, in a secure integrated and easy way, through multiple electronic channels"⁽⁶⁾.

The Action Plan

As mentioned in Khan et al., (2013), the action plan includes building a sustainable e-government workforce, improve public interaction with the government, develop a culture of cooperation and innovation, and improve government efficiency.

➤ **The Readiness, Acceptance and Adoption of the KSA e-Government**

Since the Government of Saudi Arabia began implementing the Yesser program, it has shifted the e-government program significantly, especially between 2005 and 2008. The initial efforts of Yesser focused on large cities, despite the vision of the Yesser program boldly aiming at ensuring that everyone in the KSA would enjoy the benefits of the e-government

⁽⁶⁾ (Khan et al., 2013, p4).

program by 2010, in-depth analysis of adoption rate and progress in program implementation suggests that only core e-government services have been implemented by 2014. Many studies indicated that the slow rate of government adoption and implementation is due to challenges for various obstacles, most of which are related to user aspects (citizens), and government service providers (Basamh & Qudaih, 2014).

A number of initiatives have been undertaken by the Government of Saudi Arabia to help in the adoption and dissemination of ICTs in general and e-government in particular. The Prime Minister and the King of Saudi Arabia (SA) have ordered the investment of 3 billion Saudi Riyals in 2003 to support e-government readiness and 3 billion in late 2006. Although the overall implementation and application of e-government was slow in SA, intermediaries were helping to improve e-government adoption and deployment as intermediaries (e-offices) were introduced as part of the government's e-government strategy, to facilitate citizens' access to e-government services. In addition, intermediaries help bridge the gap SA faces in terms of information technology and infrastructure readiness for e-government deployment (Al-Sobhi & Weerakkody, 2010).

Due to the rapid development and significant improvements in information and communication technologies, the adoption of e-government services by citizens is of concern to the Government of SA due to the poor readiness of citizens to use these technologies. In order to succeed in the future, the Government of SA has been working to adopt and activate communication

and technology systems for all citizens and encourage citizens to use e-government services through the readiness and adoption (Alateyah et al., 2013).

➤ **The Challenges Faced by e-Government in KSA**

There are some challenges and obstacles facing the adoption and implementation of e-government (Yesser) in the KSA. There are a number of challenges to external and internal challenges associated with e-government implementation as well as the high costs associated with implementation. One of the main challenges facing the implementation of the e-government system in the establishment of e-government infrastructure, the adoption of e-government system availability, computer literacy, trust, accessibility, authentication, ease of use, and accountability issue (Basamh & Qudaih, 2014).

In addition, security problems have hindered the implementation of e-government not only from the perspective of government but also from the citizen's side. The technical infrastructure is not integrated at the moment; not all government departments share the e-government portal and not all government services are available online (Al-Sobhi & Weerakkody, 2010). Besides, Alsheha (2007) discussed some of the challenges facing the e-Government program in SA, including the problem of rules and regulations, one of the most difficult concerns is the rules and regulations of government agencies, where many of these systems are complex and centralized, lack of qualified staff and IT professionals to

effectively and efficient run the e-government program. One of the difficulties that the Government of Saudi Arabia may face in establishing e-government is that the use of the Internet throughout the e-government was very low, where between 13% and 15% of the population actually use the Internet (Alsheha, 2007).

➤ **The Lessons Learned from e-Government in the KSA**

The experiences of the first five-year plan suggest that a clear strategic approach (action plan) may provide a sustainable framework for e-government adoption. However, it has shown that a good plan alone does not guarantee success. The plan must be flexible enough to adapt to external and internal challenges (Franke & Eckhardt, 2014). In addition, the implementation and subsequent adoption of e-government requires a substantial and sustained commitment to resources, public-private cooperation and government (Basamh & Qudaih, 2014).

2.5.1.4 e-Government in Egypt

Egypt had been investing in building ICT infrastructure since 1985 as a vital tool for development. Egypt continues to face many challenges in its efforts to implement e-government initiatives successfully; this is mainly due to traditional problems or obstacles such as; resistance by employees and citizens alike, weak ICT infrastructure and lack of confidence and security in e-services and their use, that can limit the growth of any government as illustrated below (Zaied et al, 2017).

Egypt, which was particularly among from the first and successful in the implementation and application of e-government in Africa, is driven by a clear strategy and with the support of a customized organizational setup (Klischewski, 2015). Since early 2004, Egypt started implementing the e-government program with the assistance of the Ministry of State for Administrative Development (MSAD), the organization responsible for e-government programmed in Egypt; the e-government project is one of the strategic projects to build the information base in Egypt. It will also pave the way for an Egyptian society based on information technology that will be able to confront the information technology revolution and narrow the digital divide between Egypt and the developed world (Abdelkader, 2015).

➤ **e-Government Strategy**

The Vision

The vision of e-Government initiative in Egypt is (Abdelkader, 2015);

“Delivering high quality government services to the public in the format that suits them” ⁽⁷⁾.

Such vision relies mainly on three principles,

Citizen centric service delivery;

Community participation; and

Efficient allocation of government resources.

⁽⁷⁾(Abdelkader, 2015).

The Action Plan

The Egyptian e-Government program has been divided into two phases. The first phase was implemented during the period (2001-2007) in which the identification and approval of the strategic plan was the main issue, implementation and evaluation of pilot projects. In addition, this phase witnessed the geographical and sectorial deployment of some projects. The second phase was implemented during the period (2007-2012) focused on the expansion of pilot projects at the national level and the development of the government administrative apparatus (Ayman & Azim, 2016).

➤ The Readiness, Acceptance and Adoption of the e-Government in Egypt

Ayman & Azim (2016) discussed the beginning of the readiness for e-government in Egypt; the Egyptian Government has recognized the importance of providing e-government services since 2004. Ministry of Communication and Information Technology (MCIT) launched the Egyptian e-government program in 2001 as part of a technology strategy Egyptian Information and Communications and in 2004, the program was transferred to the Ministry of State for Administrative Development (MSAD) as a component of administrative reform and development. During the period from 2001 to 2003, preparatory and support initiatives were taken to launch the e-government project, such as the launch of the free Internet service in 2002 to provide everyone with easy access and at a reasonable cost to the Internet. This is in addition to what IT clubs

launched in 2003 to facilitate access to ICTs even in disadvantaged areas. Finally, in January 2004, the Egyptian Government announced the launch of its first official portal.

The government's readiness is a function of three variables or indicators: the web measurement index (reflecting the content and delivery of e-government services); the telecommunication infrastructure index (reflecting the degree to which a country is prepared for electronic transformation and electronic delivery); the human capital index (reflects the willingness of citizens to participate in the world connected to the network). Overall, Egypt has made some efforts to improve its e-Government readiness rating over the last few years. In terms of achievements in telecommunication infrastructure, communication and access has been improved through the adoption of a number of policy measures, including the liberalization of the telecommunications sector through the launch of three licenses for mobile network operators; in addition, high quality broadband connections in major cities and commercial complexes. Given that the government of Egypt had taken some initiatives to improve the classification of e-government readiness as mentioned above. But the United Nations (UN) e-government survey (2012) ranked Egypt's e-government at 107th place worldwide (Gebba & Zakaria, 2015).

The Egyptian Government seeks to adopt and accept e-government. The factors that affect the acceptance and adoption of e-government in Egypt are identified as follows. First, the vision should be clear from the beginning with the creation of a roadmap for the future. Second, supportive leadership for e-government and its services, is one of the important factors for the e-government success. Third, the training of citizens on e-government to be able to use the related techniques. Fourth, e-government requires collective efforts from many public sectors constituents. Fifth, the awareness includes the use of the media to introduce the concept of e-government to people in the public sector, demonstrate the benefits of e-government and the importance of e-government implementation. Sixth, information and communication technologies are important element in the implementation and development of e-government, not only the adequate distribution of computer technology or social networking, but the general application of telecommunication services is essential to achieve e-government. Finally, information technology standards, which means hardware and software specifications, and their important role in helping the citizens to manage and use technology (Abbassy & Mesbah, 2016).

➤ **The Challenges Faced by e-Government in Egypt**

Despite the fact that Egypt was a pioneer in launching its e-government program, e-government in Egypt is still slow and uneven compared to other countries in the Middle East to a degree far from other Arab countries,

where this is due to challenges and barriers to the successful implementation of e-government (Ayman & Azim, 2016). These include the

lack of an electronic signature mechanism,

lack of e-payment transactions,

computer illiteracy and low internet access, and

staff resistance.

➤ **The Lessons Learned from e-Government in Egypt**

According to the challenges faced by e-government in Egypt include the lessons to be learned the following (Klischewski, 2015):

1. Creators of a network hub must clarify the direction of the goal, the responsibilities of membership and performance evaluation of all government agencies involved.
2. Participating government agencies need to understand, commit to, and practice sharing of accountability beyond hierarchy or ownership.
3. The country with little collaboration culture and network experience is better off to rely on accepted dominant actors for managing inter-organizational collaboration hubs in e-government.

2.5.2 The Municipal Level

2.5.2.1 Local e-Government in United Kingdom (UK)

Since the benefits of Internet-based business opportunities involving ICT have become evident and have been felt not only by businesses, but by governments around the world, investments in e-services have doubled. The United Kingdom (UK) is one of those countries that has eagerly embarked on a number of e-government programs on both the local government and the national level to enable all major public services (Weerakkody et al., 2004).

The e-government efforts in the UK are increasingly viewed as a means of modernizing public services, not merely a tool to automate current government services processes. In recognition of the need for local councils to provide efficient and better public services, the central government in the UK has initiated the idea of 'Modernizing Government' to achieve multiple goals such as delivering customer services more efficiently. To achieve these goals, the UK government has created e-governance. Local governments in the UK began implementing e-government by 2005 (Jain & Kesar, 2007).

Most citizen-government transactions are conducted at the local government level. The UK government realized this by allocating some funding to local authorities to enable to meet their targets of 100% electronic service delivery by 2005. Despite this, most of the funding went

to the central government initiatives. The progress is measured against e-government application data (Paris, 2005).

➤ **The Readiness, Acceptance and Adoption of Local e-Government in UK**

The success of e-government depends to a large extent on the benefits and level of utility services offered to citizens. The current e-government program in the UK focuses on enabling local e-governments in various precincts of the UK, providing services and information via the Internet and preparing e-government portal (Weerakkody et al, 2004).

The implementation of local e-Governance began in 2004, focusing on improving infrastructure facilities, operating systems, databases, e-services, and free Internet access. In addition, the adoption and acceptance of technological developments helped to implement the local e-government. The shift from manual to electronic environment took a number of steps, such as the integration of remote offices in the Wide Area Network (WAN), and implementing security features such as firewalls, load balancing programs, single directory structures, and passwords to promote digital media and optimize local e-government (Weerakkody & Choudrie, 2005).

➤ **The Challenges Faced by the Local e-Government in UK**

The main challenge is to ensure compatibility and interoperability between various government databases. The UK has barriers such as dissemination, awareness and content designed when deploying local e-government (Weerakkody et al., 2004).

Jain and Kesar (2007) discussed the challenges facing the optimal implementation of the local e-government initiative in the UK. Based on the results and studies in the implementation of the local e-government in the UK, some of the main issues and challenges in the implementation of local e-government appear. The first is the availability of relevant information and lack of resources to update the information on regular basis has proved to be a major issue. The second is the lack of positive processes and mentality towards local e-government and insufficient planning and support for the local e-government initiative, where there is a lack of e-government knowledge and skills among managers at the local level in the UK.

➤ **The Lessons Learned from Local e-Government in UK**

A more positive and strong marketing campaign is needed in the UK at the local and national levels to encourage local e-government. This campaign can include stimulating public awareness of local e-government through government-sponsored workshops and seminars at the local and national levels (Weerakkody et al., 2004).

2.5.2.2 Kuusamo e-Municipality (Finland)

The digitization of Finnish municipalities is still far from the highest level of e-government among governments, but the trend is clear. Digitalization has the potential to make municipal operations more efficient, while increasing customer experience through modern interactive digital services can also provide them with structured data and action intelligence to improve the decision-making process and the ability to rely on them in real time (Ahveninen, 2016).

Finland is one of the largest European countries with a population of 5.1 million, and it's the most developed European countries in the field of information technology and communications. The project of e-government in Finland is part of a huge project to restructure public administrations in Finland. The project was launched in 1990 to improve the level of government services provided to citizens. The Finnish government started its project by launching the One Stop Government (OSG) Government is unified so that all government departments are assembled in one building so that the citizen can complete his transactions from one place (Hayajneh, 2012).

Finland has a total of 444 municipalities spending a total of 720 million euro a year on ICTs for the implementation and application of the e-municipality project, one of the e-government projects in Finland (Hayajneh, 2012). The municipality of Kuusamo was one of the municipalities in Finland that carried out this project.

The municipality of Kuusamo began its efforts to build a knowledge society in the city to systematically develop cognitive capabilities. It is the first municipality in Finland to use the concept of strategic IT planning (Hayajneh, 2012) .

Kuusamo began to implement a strategy for economic and social development since 1987, which led to concrete and measurable changes. The objective of this strategy is to enable e-services and establish a specialized local authority. This strategy focused on developing an IT culture, utilizing ICTs in business and improving the IT infrastructure (Improvement and Development Agency (IDeA) & Society of Information Technology Management (Socitm), 2002).

➤ **e-Municipality Strategy**

The Action Plan

The e-Municipality project was implemented within the municipality of Kuusamo through four main phases (Hayajneh, 2012). It is as follows:

1. Phase 1: started in 1987 when a decision was made to invest in the long-term information technology and its use in municipal work. Where a number of projects aimed at computerizing the internal works of the municipality have been initiated. The most important project in this period is the KuusamoOn project and aims to develop the uses of information technology in the work of the municipality.

2. Phase 2: Started in 1990 during this phase, the One Stop Shop (OSS), which provides all municipal services from a single window, was developed.
3. Phase 3 (1995-1997): This phase began with the project of developing the information network in the municipality. A team was also set up to develop a strategic program to develop a number of electronic services that the municipality can provide.
4. Phase 4 (1997-2004): At this stage, most of the services approved in phases I and II were activated and new services were developed and delivered via electronic means.

➤ **The Readiness, Acceptance and Adoption in e-Municipality in Kuusamo**

Kuusamo has struggled to accept and embrace local e-government in its municipality. It focused on increasing the empowerment of e-services in the municipality. In addition, the municipality has shown courage in adopting new and modern technologies that have helped in the electronic transformation in the provision of services. Furthermore, Kuusamo focused on customers and citizens to improve its e-service experience and increase its ability to deal with electronic transformation (Improvement and Development Agency (IDeA) & Society of Information Technology Management (Socitm), 2002).

The digital government in Finland has a long history, where leading policies can be traced back to the 1970s when ICTs were seen as an essential part of good governance. However, the 1990s were considered the golden age when Finland became one of the leading countries in information technology. Also Finland ranked first in Internet communications in terms of capital and technological innovation. Many government projects were implemented and implemented. In the 1990s, Finland became one of the best international practices (Osifo, 2018).

➤ **The Challenges Faced by e-Municipality in Kuusamo**

According to Organisation for Economic Co-operation and Development (OECD) (2003), while Finland is a leader in e-Government and e-Municipality initiatives, it had been facing a number of critical challenges for e-municipality and broader governance, such as delivering a clear vision to the e-municipality and increasing inter-agency collaboration. Other challenges also included strengthening internal management structures and ensuring ownership of e-municipality initiatives.

2.5.2.3 e-Municipality in Greater Amman (Jordan)

Since its inception, the Greater Amman Municipality has consistently and continuously endeavored to improve its business and services for the convenience of its citizens and to provide the best services. As the Internet entered Jordan, the municipality became aware of the importance of the Internet and began to think about how to use the Internet to serve the public

and provide services at the lowest cost and time and at the highest efficiency (Mofleh & Wanous, 2008).

➤ **e-Municipality Strategy**

The Vision

“Amman Municipality is a pioneer to be a flexible city, organized, modern, intelligent, safe, attractive, sustainable, spiritually oriented, friendly, viable, and proud of its heritage and authenticity”⁽⁸⁾ (Greater Amman Municipality, 2018).

The Action Plan

The Greater Amman Municipality adopted the five stages of implementing the e-Municipality (Hayajneh, 2012). Include:

1. Phase 1: Fast-track pilot projects, where a range of services have been implemented and submitted via the Amman municipality website.
2. Phase 2: The development of the administrative control of the project with the design of some of the main technological foundations and the identification of the necessary resources.
3. Phase 3: The constructions of message exchange services, re-engineering (design) of services and procedures.

⁽⁸⁾ <https://www.ammancity.gov.jo/ar/gam/about.aspx>.

4. Phase 4: Selection and construction of the main information systems for back office systems, document management systems, document movement and the Internet portal.
5. Phase 5: Building a payment portal through financial payment, analyzing traffic over the telecommunications network and developing plans to ensure business continuity.

➤ **The Readiness, Acceptance and Adoption of Greater Amman e-Municipality**

In the case of the Municipality of Greater Amman, one of the factors that helped to adopt and accept the e-municipality in the Greater Amman Municipality is the technological readiness in Jordan for the citizens, the availability of infrastructure, internet connection and the portal all helped to implement and adopt the municipality's work electronically. Studies revealed that there is a positive relationship between the information technology infrastructure with the quality of information and its use and its organizational impact, since without a strong infrastructure, the municipality cannot build a relationship of trust among stakeholders and encourage of the adoption of e-municipality. This is in addition to the people's awareness of the importance and benefits of e-Municipality and access to services electronically (Al-rawahna et al., 2018) and (Trawnih & Behcoum, 2018).

➤ **The Challenges Faced by e-Municipality in Greater Amman**

This paper discussed the challenges and obstacles to the implementation of e-Municipality in Jordan, where barriers were presented from two different perspectives. First, from a service provider's perspective, it has explored the following barriers: IT infrastructure gap, lack of awareness, insecurity and privacy, mistrust, insufficient skilled human resources, lack of collaboration, public-private partnerships, lack of training and resistance to change. The second point is the citizens' perspective. They have explored the challenges faced by the citizen. The citizens prefer face-to-face services, lack of confidence in electronic services, lack of financial ability to purchase computers and subscription in the internet also insufficient legislation and regulations governing of e-transactions (Al-rawahna et al., 2018).

➤ **The Lessons Learned from e-Municipality in Greater Amman**

The technological changes that have affected all areas of life have contributed to major changes. This has contributed to the development and modernization of Greater Amman Municipality. One of the lessons learned from the implementation of the e-municipality is the development and use of the best technologies and the installation of a technological infrastructure capable of implementing the e-municipality. In addition to overcoming resistance to change, cooperation with the private sector can be beneficial in cost-sharing, increasing people's awareness by adopting

training courses and considering transformation in electronic services as a process of restructuring (Darwazeh et al., 2016).

2.5.2.4 Dubai e-Municipality (United Arab Emirates)

Dubai Municipality (DM) is considered one of the largest institutions in the Emirate of Dubai in terms of the size of its employment, the size of the services it provides, and the projects it carries out. It is the leading and driving municipality for the growth and development of the Emirate of Dubai (Dubai Municipality, 2016a) and (Hayajneh, 2012). In addition, the launch of the e-government project in DM is part of the change and development taking place in Dubai. The change adopted, which the municipality has been following; is based on a clear vision and a strong desire for change. This has produced a successful experiment that became an important reference for all the Arab cities (Hayajneh, 2012).

➤ e-Municipality Strategy

The Vision

“Building a happy and sustainable city”⁽⁹⁾ (Dubai Municipality, 2016b).

The Action Plan

According to Hayajneh (2012), three stages were identified for the implementation of the e-government project in DM. The stages were

⁽⁹⁾ (Dubai Municipality, 2016b, p4).

divided depending on the available technological infrastructure and the services that could be implemented at each stage. These phases include:

1. Phase 1: Focus on strategic planning of the project and foundation of the transition to an e-municipality.
2. Phase 2: Development and modernization of the infrastructure of telecommunications and information technology and the selection of a range of services to implement and provide electronically.
3. Phase 3: The stage of integration and full interaction to provide integrated interactive services to customers.

➤ **The Readiness, Acceptance and Adoption of Dubai e-Municipality**

Over the past decade, the emergence of new technology has led to the emergence of smart cities aimed at providing their stakeholders with technology-based solutions that are efficiency and effectiveness. Furthermore, Dubai was ranked 28th in 2012 in its readiness to implement and provide its services electronically in 192 countries. This is a proof of Dubai's readiness to adopt and accept e-municipality in order to provide e-services (Samara & Raven, 2015).

Dubai has begun to develop its ICT infrastructure to cope with rapid developments. The successful management of change in DM, which had relied on a clear vision and a strong desire for comprehensive change based on the communications and information revolution, had an impact on the

success and adoption of the e-municipality. In addition, the use of private sector companies, training of customers and employees and focusing on the needs and requirements of customers (Hayajneh, 2012).

DM had sought to adopt and accept e-government in its municipality, and to reach the desired transformation has worked to adopt on its resources to move towards a technology-intensive information environment. It also helped to adopt and accept the Dubai e-municipality's successful leadership that supported the country's electronic transformation. This is in addition to adopt and accept the best technologies and equip the technological infrastructure of the government and promote it (Sethi & Sethi, 2008).

➤ **The Challenges Faced by e-Municipality in Dubai Municipality**

According to Alketbi (2018), the biggest challenges and barriers facing the e-municipality in Dubai are:

1. The position of the stakeholders that the project will not succeed and resistance to change by the employees and employers.
2. The fear held by the employees that, through the implementation of e-government, their jobs would be taken over by computers.
3. Technological challenges through the purchase, installation and maintenance of equipment. However, this is mitigated by the increase in technological progress.
4. Lack of required technical resources.

5. Dependence on foreign technology, as the country has great experience in the use of technology, but development is not within its competence and field.

➤ **The Lessons Learned from e-Municipality in Dubai Municipality**

DM offers a variety of online services for both individuals and businesses. Within a short period of six years, Dubai has managed to get 90% of government services online. The lessons learned from the Dubai e-municipality implementation experience can serve as a guide in managing similar complex initiatives. These include, strong leadership, commitment and vision, flexible and robust infrastructure, development strategies, human resource development and public-private partnerships (Sethi & Sethi, 2008).

2.6 Conclusion

In this chapter, the concept of e-municipality and its benefits have been identified in several viewpoints of different researchers. Then, the concept of strategy and SWOT analysis was presented as a tool that will be used to develop strategies to overcome the challenges and obstacles for the optimal implementation of the e-municipality in the Palestinian municipalities. In addition, the TAM model was presented and clarified, which will be used to measure and assess the readiness, acceptance and adoption of the e-municipality in the Palestinian municipalities.

In the second part of this chapter, the researcher presented some international and Arab experiences at the national and local levels to benefit from these experiences in the Palestinian municipalities, and to assessment of e-municipality in Palestine.

The Arab and international cities have considerable experiences that can be used and transferred to the Palestinian experience. The adoption of the e-municipality helps and contributes to raising efficiency and performance and providing the highest levels of services to citizens. However, these cities face some challenges, including those who have been able to overcome them and develop strategies that have contributed to the optimal implementation of the e-municipality, and some of them are still trying to overcome these challenges.

The most important challenges facing these cities can be summarized as follows:

1. Absence of regulations and laws supporting the application of e-municipality.
2. Lack of adoption of modern technologies in municipalities and technical infrastructure that is not ready for the new system.
3. Weak experience and lack of sufficient awareness in the electronic municipality and its benefits.
4. Poor strategic planning to accommodate and adapt to new technology.

5. Low level to accept and adopt technology in municipal departments.
6. Some workers do not accept the principle of switching to e-municipality, which requires a great deal of changes in working methods and procedures.
7. Poor training and lack of IT specialists.

Chapter Three

Research Methodology

3.1 Introduction

This chapter presents an overview of the research design and methodology used in this thesis. It identifies the research paradigm and methods adopted. Initially, there is a brief account of the theory and the reasons for choosing particular approaches and methods; this is followed by a list of differences between the various types.

This chapter also offers an explanation and justification for the research method strategy. Data collection methods then discussed in detail, followed by a specific focus on the sources from which information was obtained and on the selection of the sample of participants. The process used to satisfy the aims and objectives of the research to reach any conclusive result is discussed in detail. The chapter ends by explaining the methods of data analysis adopted to ensure the validity and reliability of the findings and ultimately to provide logical answers to the research questions.

3.2 Research Methodological Approach

The choice of methodology is an important decision that the researcher must make. There are two main types of research methodologies; quantitative research and qualitative research. The choice of proper type depends on the problem that the research addresses.

This research follows mixed (quantitative and qualitative) research approaches in order to reach the research objectives. As mentioned before, the purpose of this research is to study and analyze the acceptance and adoption of the Palestinian municipalities of the e-municipality considering an appropriate model (the TAM model), identify the challenges and obstacles facing the e-municipalities in Palestine, and propose solutions to these challenges. This is in addition to identify the best ways to implement the e-municipality in the Palestinian municipalities, through the considering an appropriate analysis approaches.

This section will highlight some issues regarding the quantitative and qualitative research, their features, and the reason behind the selection of quantitative and qualitative research approaches in this research.

3.2.1 Quantitative Research

Quantitative research can be defined as explaining a phenomenon according to numerical data which are analyzed by mathematical methods, especially statistics. It is a kind of experimental research in a social phenomenon or a human problem and a theoretical test consisting of equations measured by numbers and analyzed using statistics to determine whether the theory interpreted or predicted phenomena and aimed at development of forecasts and generalizations (Yilmaz, 2013).

Quantitative data focuses on the quantity of objects. This includes the determination of how many of them? What are statistical patterns? It usually takes the form of numbers, and its analysis includes counting or measuring these numbers to draw conclusions (Nasuti, 2016).

The quantitative research involves the use and analysis of numerical data using specific statistical techniques to answer questions such as who, how much, what, where, when, and how. It requires the reduction of phenomena to numerical values in order to carry out the statistical analysis (Apuke, 2017).

3.2.2 Qualitative Research

Qualitative research, a set of comprehensive data on many variables over a long period of time, based on the cognitive assumption that social phenomena are very complex and intertwined (Yilmaz, 2013).

Qualitative research focuses on the quality of things. This includes the determination of what is their nature? What are they like? How can they be described? Often includes participants' opinions or their inner worlds, and may include data generated through the use of interviews, focus groups, and so forth. Qualitative research often combines data from relatively small samples of people. Because qualitative data often takes the form of words, narratives and descriptions, which are not easy to analyze, the researcher must do a lot of intelligent interpretation of these data to identify relevant

topics and make them understandable and reliable to the reader (Nasuti, 2016).

Quantitative and qualitative research designs differ in terms of their epistemological, theoretical and methodological underpinnings. Quantitative research is informed by the objective knowledge theory and thus seeks to develop illustrative global laws in social behavior through the statistical measurement of what is supposed to be a fixed fact. On the other hand, quantitative approach supports the view that psychosocial phenomena have an objective reality independent of the subjects being studied, i.e. that the world, the researcher, the teacher or the subjects are viewed as relatively separate and independent (Yilmaz, 2013). Table 3.1 provides a summary of the key typical differences between qualitative and quantitative research.

3.2.3 Mixed Research

Mixed methods focus on collecting, analyzing and mixing both quantitative and qualitative data in a single study, and are seen as the third methodological movement. The mixed methods involves a qualitative and quantitative dimension, but difficulties often arise when the researcher attempts to articulate how the two elements relate to one another (Doyle et al., 2012).

This research methodology is considered to be deeper than either qualitative or quantitative research method separately. It is common to combine qualitative and quantitative research. Combining methods in one search project may be useful for several reasons. Using more than one method to collect evidence helps reduce the risk of generating false results.

Table 3.1: The Key Typical Differences between Quantitative and Qualitative Research Approaches.

Criteria	Quantitative Research	Qualitative Research
Purpose	To test hypotheses, look at cause and effect, and make predictions.	To understand and interpret social interaction.
Group Studied	Larger and randomly selected.	Smaller and not randomly selected.
Variables	Specific variables studies.	Study of the whole, not variables.
Type of Data Collected	Numbers and statistics.	Words, images, or objects.
Form of Data Collected	Quantitative data based on precise measurements using structured and validate data-collection instruments.	Qualitative data such as open- ended responses, interviews, participant observations, field notes, and reflections.
Type of Data Analysis	Identify statistical relationships.	Identify patterns, features, themes.
Objectivity and Subjectivity	Objectivity is critical.	Subjectivity is expected.
Role of Researcher	Researcher and their biases are not known to participants in the study, and participant characteristics are deliberately hidden from the researcher (double blind studies).	Researcher & their biases may be known to participants in the study, and participant characteristics may be known to the researcher.
Results	Generalizable findings that can be applied to other populations.	Particular or specialized findings that is less generalizable.
Scientific Method	Confirmatory or top-down: the researcher tests the hypothesis and theory with the data.	Exploratory or bottom-up: the researcher generates a new hypothesis and theory from the data collected.
View of Human Behavior	Regular and predictable.	Dynamic, situational, social, and personal.
Most Common Research Objectives	Describe, explain, and predict.	Explore, discover, and construct.
Focus	Narrow-angle lens; tests specific hypotheses.	Wide-angle lens; examines the breadth and depth of phenomena.
Nature of Observation	Study behavior under controlled conditions; isolate causal effects.	Study behavior in a natural environment.
Nature of Reality	Single reality; objective.	Multiple realities; subjective.
Final Report	Statistical report with correlations, comparisons of means, and statistical significance of findings.	Narrative report with contextual description & direct quotations from research participants.

Sources: (Apuke, 2017)

Also, qualitative research can be done to identify the research questions to be addressed later by quantitative methods; or a quantitative study may indicate appropriate questions for further research by qualitative methods. The combination of methods may allow a broader range of issues to be addressed during the course of conducting a research project than would be possible if exclusive use of either quantitative or qualitative methods had been made. Although many research projects clearly refer to a specific approach, in many cases projects may benefit from a combined-methods approach (Philip, 1998).

3.3 Type of Sampling

There are two types of sampling; the purposive (non-probability) and random (probability) sampling. The appropriate sampling type for this research is the purposive (non-probability) sampling, because the target people have some appropriate characteristics needed to get the required information and data cannot be obtained from other choices, also under this category of sampling, there are two kinds of purposive sampling; the judgment sampling and the quota sampling (Taherdoost, 2016a).

According to Etikan & Bala (2017), judgment sampling is based on the judgment of the researcher as to who will provide the best information to succeed for the objectives study, and the quota sampling is which participants are chosen based on predefined characteristics such as sex, or races. Therefore, judgment sampling is selected for this study.

In this research, the interviews are intended to be conducted with five experts and high-rank employees at the municipal and national levels. The same person may be interviewed more than one time. Those sample members were chosen as subjects on purpose as they have the best source of needed information on e-municipality in Palestine in general, and in the Palestinian municipalities at specific, as their experiences and interests are related to the strategic analysis, planning and development of e-municipality.

In this study, a sample of Palestinian municipalities was selected to be analyzed through their websites and documents or through a number of interviews with specific officials there, namely mayors, information technology and strategic planning officials.

The questionnaires were distributed to the sample of nine Palestinian municipalities. The sample members were selected from the employees who are familiar with the e-Municipality initiative. Specifically, the sample was targeted to managers and information technology officials in the municipalities as well as any employee with sufficient experience and expertise in the e-Municipality initiative and its applications.

3.4 Data Collection Methods

Data collection relevant to the mixed methodological approach, utilized in order to achieve the research objectives, is presented in this section. Several methodologies have been used to collect relevant information from the various sources, including the following:

- **Review of relevant literature:** A systematic analysis of literature is used to collect research-related information in order to understand basic concepts and know the experiences of other countries in the e-municipality. The literature reviewed included relevant electronic research, articles, and available studies and books. This is in addition to documents by produced the Palestinian government institutions, whether published or unpublished.
- **Analysis of municipalities' websites:** Reviewing and analyzing of a number of websites for Palestinian municipalities was done in order to assess the level of readiness, acceptance, adoption and development towards e-municipality, and what each of the selected municipalities achieved in the matter of delivering services electronically.
- **Distributed Questionnaires:** This involved distributing questionnaires which were designed to collect qualitative and quantitative data on the acceptability, adoption and readiness of Palestinian municipalities for e-municipalities. With data collected and analyzed, the challenges facing the Palestinian municipalities can be identified, in order to develop

strategies to deal with them, and measure the performance indicators within the municipalities in the transition to an electronic municipality.

- **Conducting Interviews:** To collect the information needed to complete the research, tools used include face-to-face interviews organized for collecting qualitative information with representatives of national official institutions and local bodies on the current state of the e-municipality.

3.4.1 Interview Design

In this research, the unstructured interview form was adopted to get the needed detailed information and data for the readiness, acceptance and adoption for e-municipality, strategic framework and the challenges faced the implement of e-municipality.

A consent letter addressed from the university to the officials or interviewees was delivered upon request of the participant.

The researcher scheduled a number of unstructured interviews and meetings -that will give an overall picture of e-municipality current situation, strategic concepts and approaches- with government agencies personnel, such as the Ministry of Telecommunication and Information Technology (MTIT), the Ministry of Local Government (MOLG), and the Municipal Development and Lending Fund (MDLF). Detailed internal/external environment information were gathered, and several important key issues were discussed and considered such as leadership, change management, strategic planning, the acceptability and adoption of

e-municipality systems by the Palestinian municipalities and their readiness and implementation issues, and the requirements and the available support for e-municipality development.

In this interviewing approach, one to one conversations between the interviewer (researcher) and participants (interviewees) were conducted. The researcher had a list of questions or topics to be discussed, with minimal control over the order in which the topics are covered, and over the respondents' answers. According to Mathers et al. (2005), the unstructured interviewing (sometimes referred to as "depth" or "in depth" interviews) is called because they contain very little structure, the interviewer approaches the interview to discuss a limited number of topics, sometimes only one or two topics, and sets up consecutive questions according to the previous response.

In total, five unstructured interviews were conducted with key persons, who have experience in the domain of the research. Because unstructured interviews often involve open-ended questions and discussions that may lead to less focus than the side being searched, while trying to take notes and could miss another chance, this approach will result in poor notes. Registration was therefore used in interviews, recorded and later transcript for analysis. This allows the interviewer to focus on interacting with the participant and follow the discussion.

One step must be taken before interviewing, which was related to taking the permission of the participants (interviewees). For this research, the researcher was ready for the letter of approval and permission from the experts and officials to record their interviews.

The researcher phoned or emailed each participant to confirm the meeting date, time and location of the interview. Prior to each scheduled interview, the researcher made a follow-up phone call or sent an e-mail to remind the participant of the meeting's date, time and location.

3.4.1.1 Transcription and Translation

As with written notes and detailed recording, a necessary component of interviews is associated with transcription and translation, as this forms the basis for data analysis. The unstructured interviews were conducted in Arabic and recorded using tape recorder. The researcher read the transcription several times to ensure the accuracy of the relationship between recorded and written transcripts. Then, each participant was given the opportunity to review and confirm the final draft of the response, if he/she requested. Then the Arabic transcripts were translated into English.

The information generated from the interviews was classified under a specific item and target, based on the relevant keywords.

The information and data gained from each interviewee on a specific issue would be under a comparison process with the information and data gained from the others on the same purpose. If there was consistency in the gathered data, it would be approved for used, but if this is not the case, the researcher should have schedule a new meeting with each interviewer with conflicting observations. The researcher needed to be more focused on the contradictory issues and would determine a set of questions to achieve the right information.

3.4.2 Questionnaire Design

This study adopted the drop-off/pick up questionnaires approach, considering self-completion surveying method, to collect a quantitative and qualitative primary data about the e-municipality in the Palestinian municipalities. The questionnaire is an important research instrument. It is used for gathering or extracting information from a sample. In this research, which aims to assessment of development and application of e-Municipality strategies in Palestine, the questionnaire is one of two primary research instruments. The questionnaire designed for this research is comprehensive and detailed, with all closed questions so as to obtain a specific opinion from the participants to the questionnaire regarding e-municipality implementation.

The questionnaire design stage is crucial. The questionnaire was designed in light of the aims, objectives and research questions. To design questionnaire questions, which served the purpose of the research, a detailed review of the literature was necessary. Key variables from various sources were identified, and an inclusive list of variables, which included variables relating to the research objectives, aims and research questions, was developed for every variable evaluated, regardless of whether or not it was relevant to the implementation of e-municipality at the Palestinian municipalities.

The questionnaire consists of five main parts; the first part comprises 9 questions related to the questionnaires' responders' general information and demographic information, containing nominal and categorical (non-metric) scales. The second part comprises 12 questions relating to the implementation, application and development of the e-municipality in addition; to knowing the beginnings of the application of e-municipality and the services provided by the municipalities. The third part comprises 14 questions relating to the e-municipality is concerned in terms of administration to see the availability of understanding and vision about the e-municipality and measuring the administrative factors and human competencies and the availability of laws and legislation in support of the application of e-municipality, depending on a five-point Likert scale, ranging for 5 "strongly agree" to 1 "strongly disagree". The fourth part comprises 16 questions relating to the e-municipality in terms of technology aimed at measuring the readiness of the municipality to develop

the electronic system and the extent of acceptance and adoption to the system of e-municipality to be application and implementation in the Palestinian municipalities, depending on a five-point Likert scale, ranging for 5 "strongly agree" to 1 "strongly disagree". Six other questions have been included in the fifth part, to identify the challenges facing the optimal implementation of the e-municipality. In total, the questionnaire consists of 57 questions.

The questionnaire was distributed from mid-May 2019 until in mid-June 2019. Around fifty hard copies of the questionnaire were sent to the respondents (municipal employees) of the Palestinian municipalities, where all valid questionnaires were returned for analysis.

3.4.2.1 Pilot Test

It is necessary to try a questionnaire in advance to identify any ambiguity in the questions and to determine the range of possible answers to each question. Pre-pilot is not a formal procedure; it is a process of collecting information. The researcher should sit down with a few suitable subjects, who may be friends or colleagues, and browse the questions together to identify potential problems. After each session, the researcher must modify the questionnaire before forwarding with another group of testers. This process should continue until the researcher is confident that your questions are unambiguous, appropriate and acceptable to the respondents. As with other forms of science, the researcher need to be able to show that the data collected from the questionnaire are valid and reliable. Ideally, each

questionnaire should be undergo a formal pilot during which the acceptability, validity and reliability of the measure are tested (Williams, 2003).

In this research, in order to increase the content validity of the questionnaire items, a pilot test of the questionnaire has been conducted by supervisor study. As a result, the word, length and consistency of the questions have been modified. A pilot questionnaire was then distributed to a small group of municipal staff (six) to test the rationality of the questionnaire as suggestions were offered by some participants, and thus the final form of the questionnaire was reached and distributed.

Among the topics that have been modified or added to the questionnaire, determining the classification of the municipality, knowing what are the action plans within the municipality to reach the e-municipality, the number of posts/internal movements (within the municipality) or external movements related to the e-municipality as a daily average, and how to overcome the challenges and obstacles facing the implementation of the e-municipality. In addition, the wording and consistency of the questionnaire have been modified to make it clear and easy to understand for the respondents.

3.5 Data Analysis

After the previous steps of data collection and gathering, the analysis of the data collected was carried out based on interviews and questionnaire. The TAM model was used to evaluate the effectiveness of the use of the e-system in the Palestinian municipalities, and to follow the acceptance and adoption of technology in the Palestinian municipalities in the transition to e-municipality.

Based on TAM model, the technological related factors impacting the readiness of the people in the Palestinian municipalities to adopt e-municipality will be identified.

In addition, the data collected for the internal and external environment factors will be analyzed on the e-municipalities through SWOT analysis. This process will identify the strengths and weaknesses of the internal environment at the national level (i.e., ministries and relevant organizations), or at the municipal level (i.e., municipalities and local councils). In addition, threats and opportunities will be identified from the external environment to develop strategies to address the challenges and obstacles that hinder the implementation of e-municipality.

Based on this analysis, the strategic formulation will lead to the identification of strategies that will help solve the challenges and obstacles that impede the implementation and application of e-municipality in the Palestinian municipalities. The researcher would therefore reach the

matching process. This would be done for the four concluded external and internal factors; the strengths, weaknesses, opportunities and threats. Each internal factor would be matched with an external factor to identify four types of strategies; SO, ST, WO and WT. This combination process would be performed through developing the SWOT matrix tool.

SWOT analysis and SWOT Matrix are used to define all feasible proposed corrective measured strategic solutions. After thorough assessment for these, strategies that could be applicable to our case in the Palestinian municipalities.

Moreover, the statistical program SPSS will be used to analyze quantitative data from distributed questionnaires to conduct a kind of comparative analysis and to get casual relationships between questionnaire elements.

By this, the research would have evaluated the acceptance and adoption of e-municipality systems and the effectiveness of the system within municipalities. The challenges and obstacles facing the implementation of e-municipalities and their success will then be identified. Therefore, the researcher will draw proposals, strategies and action plans to facilitate the implementation of the e-municipality, and suggest mechanisms to solve and meet the challenges that hinder the implementation of e-municipality in the Palestinian municipalities. This is in addition to taking lessons learned from the application of e-municipality.

3.6 Validity and Reliability

Reliability and validity are the most important and fundamental attributes in evaluating any tool or measurement instrument for a good research (Mohajan, 2017). Reliability and validity are needed to present in research methodology chapter in a concise but precise manner.

Validity, according to Taherdoost (2016), shows how well the data collected in the actual area of the investigation, (i.e., measures what is intended to be measured), while reliability is related to the extent to which the measurement of the phenomenon provides a stable and consist result, also concerned with repeatability. The validity is represented through ensuring the truthfulness of findings, whereas reliability is referred to the stability of findings (Mohajan, 2017).

In this research, the validity includes two basic parts: internal and external. Internal validity encompasses whether the results of the study are legitimate because of the way in which the groups were selected, data was recorded or the analysis performed. On the other hand, the external validity, often called "generalizability", includes whether the results of the study are transferable to other groups. An important point to remember when discussing validity is without internal validity, cannot have external validity (Perakyla, 2002).

Reliability estimates the consistency of your measurement, or simply measures the degree of the instrument in the same way each time it is used

under the same conditions with the same subjects. Validity, on the other hand, includes the degree to which the researcher is measuring what is assumed, and simply more accuracy measurement (Cook, 1979).

3.7 Conclusion

This chapter discusses the methods employed in carrying out the research. It presents an overview on the research methodology and highlights the importance of mixed (qualitative and quantitative) technique adopted in this research. It also illustrates data gathering procedures including unstructured interviews and distributed questionnaire.

The analysis stage methodology, which is imperative and significant in order to draw a meaningful conclusion, has been illustrated. The components of the methodological procedure are utilized in the next chapter.

Chapter Four

The E-Municipality in Palestinian Municipalities

4.1 Introduction

Local government plays a vital role in satisfying the interests of its citizens, providing and running local services and encouraging the society. The simplest definition of local government is that type of governance that ensures that people within a given territory act collectively to ensure their well-being (Ndreu, 2016). Moreover, the local government is the focus of national development by virtue of its existence as the lowest level of government (Abdulkareem et al., 2017).

The Palestinian government, represented by the Ministry of Telecommunication and Information Technology (MTIT), Ministry of Local Government (MOLG), Municipal Development and Lending Fund (MDLF), as well as donors, paid great attention to e-government and e-municipality related initiatives. They have been providing the elements for success to serve the citizens and to strengthen the economy (Ministry of Telecommunication and Information Technology, 2016). The MOLG, MDLF, in collaboration with the Palestinian Association of Local Authorities (APLA), and with the support of donors, examined and analyzed the reality of the municipalities, and supported developing them, raising their capacities and improving their services (Ministry of Local Government, 2018a).

This chapter presents an overview of the e-local government in Palestine, the methodology of transformation towards e-municipality, in addition the requirements for the optimal implementation and application of the e-municipality within the Palestinian municipalities.

4.2 The Local e-Government in Palestine

4.2.1 Historical Background

Municipalities in Palestine are responsible for the planning and organization of cities and public services in accordance with the Local Council Law No. (1) for 1997. The capacities within the municipalities vary widely in different types, sizes and availability of resources. Municipalities are the main actors in controlling key risks. They have an in-depth knowledge of the facts on their land; they serve as an interface with the population, play a role in development and organization of activities, are responsible for local planning and development, and actively participate in crisis management before, during and after major events (Rammal & Hamad, 2008).

The State of Palestine seeks to keep abreast of technological development in order to achieve the well-being of its citizens and to achieve sustainable development. In this regard, the Palestinian Government has made numerous efforts to transform itself into an e-government. In this transformation, municipalities and local bodies were not far from this transformation. Therefore, the MOLG, MDLF and partners have made

great efforts to develop and guide municipalities, upgrade their services and improve their services.

The move towards e-Municipality was not the nascent of the moment, but because of the rapid development and progress in ICT, the beginning of the transformation towards the e-municipal system was through the computerization of the works of local bodies. The concept of computing was gradually expanded as a result of technological progress to e-Municipalities (Ministry of Local Government, 2018a).

The MOLG, the MDLF and in cooperation with the MTIT supported the implementation of various projects in the field of computerization of the work of local bodies and the provision of technological infrastructure and the establishment of public service centers and any other activities that contribute to the transformation into an e-municipality.

The e-municipality is a primary system for the delivery of services to citizens via the Internet, where citizens will be able to access the system via smart phones and computers connected to the network, and receive a package of services, e-municipality does not mean the provision of computers and connect them together, because the real concept exceeds to the depth of effective and fast administrative practices, which have become centers of public services in a number of municipalities provide, providing citizens with services with the speed and accuracy required.

The Municipal Development and Lending Fund (2016), considered the e-municipality as a targeted model for the delivery of local services to citizens in Palestine via the Internet. The local e-government uses the Internet to provide services and information to citizens, where citizens have access to the municipal electronic system through smart phones and computers. The citizens can visit the website of the municipality through a username and password can have his/ her business done.

The e-municipality is a system based on transformations in the way the local authority and the joint services councils operate through the efficient and effective use of ICT to improve the management of services and provide better services for the beneficiaries. The aim is to reach the largest number of beneficiaries who receive services from all local bodies (Ministry of Local Government, 2018b).

4.2.2 Local e-Government Objectives

According to Ministry of Local Government (2018a), the e-local government sector has several objectives to be achieved, as mentioned within the Strategic Framework for the MOLG in Palestine (2019-2023). Those objectives include the following:

1) At the national level:

- ✓ Develop the necessary policies to motivate local bodies and citizens to transform electronic services.

- ✓ Complete the development of legislation, laws and regulations supporting the transformation of e-municipalities.

- ✓ Develop the necessary working mechanisms to facilitate electronic transactions between government departments and local authorities.

2) At the level of local bodies:

- ✓ Raise capacities and raise awareness among the leadership of local bodies and their employees about the importance and how to transform into e-municipalities.

- ✓ To create the necessary technical and information infrastructure to transform into e-municipalities in accordance with the requirements of integration with e-government.

3) At the citizen level:

- ✓ Increase the demand of citizens to use e-Municipality services.

4.3 The Requirements of the e-Municipality in Palestine

There are requirements differ to transform the local government towards the e-municipality, which differ from municipality to another. Based on to the above these requirements include as identified by the Ministry of Local Government, (2018a) the following:

1. Administrative Development:

In order to promote the success of any initiative to implement e-municipality, administrative development should be carried out in terms of enhancing awareness and culture among the cadres of the local authority, developing the human cadres in the local authority, developing the organizational structure of the local authority to respond to the administrative and technological development and allowing the adoption of new solutions. In addition, there is need for re-engineering procedures in the municipalities in services provided or in administrative procedures in a fast and effective manner, as well as to developing the computerized systems used within the local authorities to cope with the technological developments.

2. Technological Infrastructure:

The importance of building and developing the technological infrastructure in the local authority as the basis for the construction and operation of computerized information systems, while ensuring their interconnection and integration with each other and enable the exchange of data with other parties to secure e-services. The building and development of the technological infrastructure in the local authority includes many aspects, such as hardware and equipment, networks, data centers and computerized information systems.

3. E-Services Development:

The development of e-services to reach the citizen wherever it is accurately, efficiently and quickly, through the establishment of an effective system of services and re-engineering the procedures of services provided in all stages and provide multiple channels to provide the service that allows citizens who are able to deal with the computer or those who do not have the skill to deal with them, on services in an accessible, efficient, fair and transparent manner and to raise the level of citizen satisfaction.

4. Financial Development:

The idea of e-municipality is to provide services in all its forms through technology in its various concepts. Therefore, there is a need for the electronic transformation process in the financial aspect as well, through its reflection on the methods of providing financial services in various electronic ways and finding solutions to provide these services. The transition to the provision of financial services is done through two methods, the direct transition from traditional operations to electronic financial services, or the gradual transition to the provision of financial services electronically. This is done through firstly, the providing the query services of financial information electronically, secondly, provide payment services, and finally, proactive in financial services. The choice of a direct or progressive transition method depends on the reality of the local body.

In summary, there are several basic requirements for the adoption and acceptance of e-municipality. The administrative requirements include the leadership enhancement of the municipality to the e-municipality project and its acceptance, and raising awareness of the importance and benefits of e-municipality among the municipality cadres and beneficiaries (citizens). These also include enhancing the culture of adopting the use of technologies in the municipality towards readiness for e-services and developing administrative systems in the municipality. The technological infrastructure requirements include the development of the municipal technical infrastructure towards readiness for the transition to an e-municipality, and to integrate and enable the municipal databases to ensure access to e-services for all, and to link and unify the existing municipal systems with the municipal electronic systems for the proper adoption and acceptance of the e-municipality initiative. The e-services, development requirements include upgrading the e-services to reach citizens wherever they are; accurately, efficiently and quickly, through the establishment of an effective system of services and re-engineering procedures for services provided, and to provide unified databases within the municipalities. The e-payment requirements in the municipalities include the provision of methods of e-payment with the provision of laws and legislation supporting it.

4.4 Methodology of Transformation and General Features of Application e-Municipality

In order to transform into e-municipalities, there is a need for a methodology of transformation that serves as the basis and reference on which to build, to refer to in the process of implementation, and to find ways and solutions to achieve the desired transformation. The variation in the reality of local bodies, their readiness for transformation, and the multiplicity of factors and determinants of transformation require a methodology based on objective analysis and diagnosis of reality, determinants and best practice (Ministry of Local Government, 2018a). Therefore, municipalities can adopt the following methodological foundations for the transition to e-municipalities; based on the MOLG strategic plan for Palestine (2019-2023).

- The transition process is a spiral process:

The adoption of the spiral model of change aims to enable the local body to progress steadily in the transformation process, where the local authority can initiate small or basic programs through which it can perceive the benefit and touch it by beneficiaries both internally and external. In the next session, the municipality will reach new benefits or increase the amount of interest obtained in the first cycle.

- Synchronization in the transformation process:

In order for the transformation process to succeed, it requires work in parallel paths:

1. The transformation in the culture of the local body and individuals: One of the features of the transformation in this area is the participant's recognition of the importance of his/her role in the overall system whether the participant is an individual or a circle and his/her keenness to link his goals to the overall goals of the local authority.
2. Shift in procedures and processes: It is the features of transformation in this area simplify and shorten the procedures and processes carried out by the local body.
3. Shift in the use of technology: One of the features of the shift in this area is the presence of sustainable investments in information and communication technology to create a flexible infrastructure with open architectures.
4. Shift in the awareness and culture of the community of the importance of benefiting from the services of local e-bodies.

Overall, the transformation process is a long-term and gradual process. Each local body can focus on a particular aspect at each stage, as reflected in the vision and mission of the local body.

- Follow-up, evaluation and ongoing review:

The existence of many components in the process of transition to e-municipalities and their interdependence with each other and the impact of each component on the other components of the transformation system requires the adoption of follow-up and evaluation and continuous review as a basic methodology in the transformation process, applying this methodology at the macro level of transformation of the local body and at the level of each component of the transformation process.

4.5 Conclusion

In summary, the e-municipality in the Palestinian municipalities is a new and modern system that has come to light with the continuous development of technologies and the continuous modernization of communication technologies. The e-municipality faces many problems, challenges and obstacles.

It is very important for the researcher to understand the local e-government aspects before analysis of the sector. The requirements for e-municipality; administrative development, technological infrastructure, e-services development and financial development, are very important in order to achieve optimal implementation and application within the Palestinian municipalities. These requirements must be taken into account prior to the commencement of both strategic analysis and knowledge of the extent to

which an electronic municipality is accepted and adopted within Palestinian municipalities.

The administration responsible for the local authority in the municipality must confront them correctly and make proper planning, promotion, studying and analysis of the acceptance and adoption of the Palestinian municipalities implementing the e-municipality, so that the e-municipality can be implemented without tangible problems.

Chapter Five

Conceptual Model and Research Hypotheses

5.1 Introduction

This chapter aims to develop a conceptual model for e-municipality acceptance and adoption based on the TAM model. The purpose of a conceptual model is to form a basis to establish a comprehensive overview of e-municipality initiative acceptance and adoption within the context of the Palestinian municipalities covered by the scope of this thesis.

The TAM model, introduced in 1986, continues to be the most widely applied theoretical model in the Information Systems (IS) field. Of all the theories, the TAM model is considered as the most influential and commonly employed for describing an individual's acceptance of IS (Lee et al., 2003). The model suggests that when a new IS is introduced to users, there are factors that influence the decision on how and when to use it (Abu et al., 2014).

5.2 The Conceptual Model

Based on the previous literature on the TAM model, and related research efforts on technology adoption, this research can be considered as an extended model for analyzing acceptance and adoption of the e-municipality initiative in Palestinian municipalities. The municipality staff (or user) readiness to adopt and use e-municipality system will be evaluated using TAM, based on what is mentioned in the literature review.

A discussion on the TAM model and factors on e-municipality acceptance is presented and the conceptual framework and model are proposed.

As stated in Chapter 1, it was indicated that there is no assessment for readiness, acceptance and adoption of the e-municipality in Palestine, as it is noticed that there is some failure in the application of e-municipality in a number of Palestinian municipalities due to the existence of challenges that were not overcome. In addition, the aim of this research is to evaluate the readiness, acceptance and adoption, as well as the implementation, of the e-municipality in Palestine using TAM model.

E-municipality systems are extensively used around the world. In recent years, e-municipality applications have been introduced in Palestine to provide public services in electronic environment. Much of the previous research focused on the adoption of e-government, primarily on the acceptance of technology, while there is lack in the adoption of technology in e-municipalities research. Thus, this study develops a TAM model to assess the acceptance, readiness and adoption of the e-municipality in Palestine.

5.2.1 Proposing Model for e-Municipality in Palestine

TAM model states that the user's view of a new technology in a system is determined by two factors: Perceived Usefulness (PU), defined as the extent to which a person believes that using the system will enhance his or her performance, and Perceived Ease of Use (PEOU), defined as the extent

to which a person believes that using system with limited effort. Decision to adopt an e-municipality services, which is, basically a web and new technology based service, depends a lot on technology acceptance by the user. The two factors (or constructs) of PU and PEOU play a very important role in shaping users attitudes and intention to adopt new technology.

Based on the previous studies, it was found that the most common factors affecting the acceptance and adoption of e-municipality include perceived ease of use, perceived usefulness, compatibility, trust in government, social influence, cultural influence-language, voluntariness, facilitating conditions, awareness, perceived cost, and trust in technology and perceived risk (Surendran, 2012) and (Mayasari et al., 2018).

When analyzing and studying in depth the situation of Palestine, it was found that the factors that affect the acceptance and adoption of the electronic municipality, include perceived usefulness, perceived ease of use, attitudes, level of technology use and availability, administrative and management support, level of e-services and availability of laws and legislation. Consequently, the conceptual model was built on these factors that examine the relationship between them and their impact on the acceptance and adoption of the e-municipality. The conceptual model is shown in Figure 5.1.

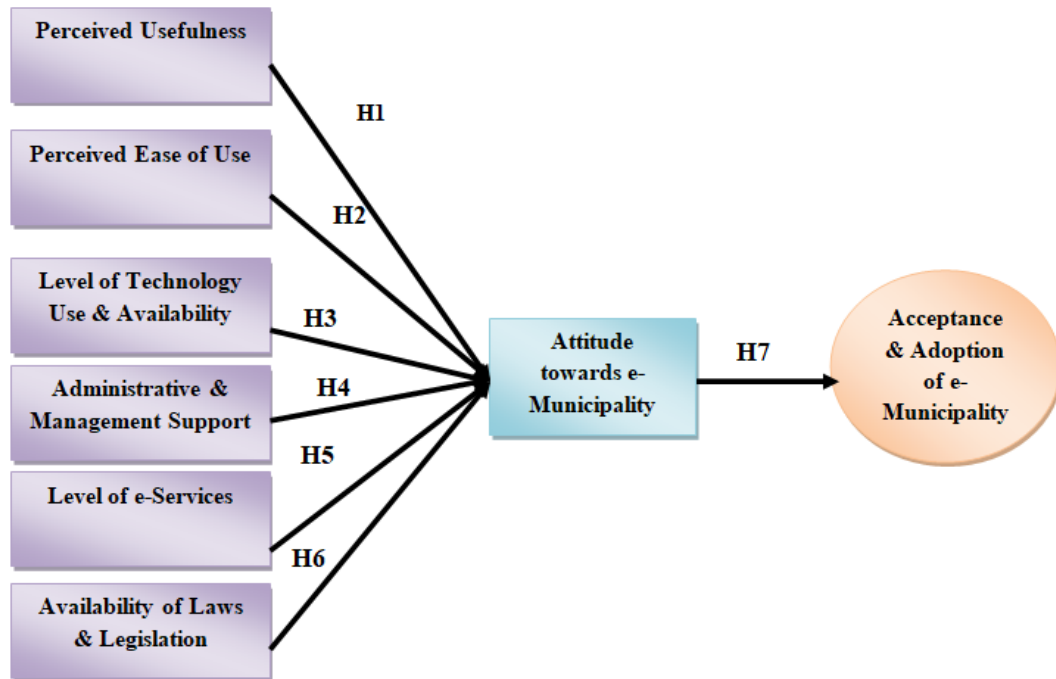


Figure 5.1: The Proposed Research Model and Hypotheses

The constructs of the model are perceived usefulness, perceived ease of use, attitudes, level of technology use and availability, administrative and management support, level of e-services and availability of laws and legislation. The model can be used to measure the acceptance and adoption of technology use in e-municipality in Palestine. Those constructs will be analyzed, and depending on the results, the indicated hypotheses can be accepted or rejected, as presented later in Table 5.1.

- **Perceived Usefulness**

Perceived usefulness of web-based service can be judged based on improved performance, productivity and service usefulness. Customers who realize that e-government services will help them achieve these benefits are more likely to adopt e-government services (Lal, 2012). The

perceived usefulness is defined here as the degree to which a person (municipal management and staff) believes that the use of a particular system would enhance his/her job performance. A system high in perceived usefulness, in turn, is one for which a user believes in the existence of a positive use-performance relationship (Davis, 1989).

Table 5.1: Constructs/Variables, the Questionnaires Item No. and Sources

Constructs	Questionnaires (Item No.)	Sources
Perceived Usefulness	Q26: 'Perception' Q48: 'Desire' Q55: 'Desire to continue or develop'	(Davis, 1989) and (Lal, 2012).
Perceived Ease of Use	Q29: 'Awareness' Q44: 'Safety system' Q45: 'Data privacy' Q49: 'Follow-up requests without come to the municipality'	(Davis, 1989), (Lal, 2012), (Al-adaileh, 2009) and (Trawnih & Bechcoum, 2018).
Level of Technology Use and Availability	Q36: 'Internet' Q37: 'Technical infrastructure' Q38: 'Specialize IT' Q39: 'latest devices' Q40: 'Computer device' Q41: 'e-Portal' Q42: 'Updating the municipality website' Q43: 'Computer connected to the network'	(Lal, 2012).
Administrative and Management Support	Q22: 'Awareness plan'. Q23: 'Manual' Q24: 'Meeting and seminars' Q25: 'Need to raise awareness' Q28: 'plans'	(Al-adaileh, 2009) and (Sebetci, 2015).
Level of e-Services	Q46: 'e-Payment' Q47: 'Most municipal transactions are made through electronic system' Q50: 'Transactions between municipality and other institutions are made through electronic system' Q51: 'Smartphone applications'	Interviews, Focus Group and Questionnaires.

Availability of Laws and Legislation	Q33: 'Availability laws' Q34: 'Availability laws cover all aspects of the e-municipality' Q35: 'Lack of laws is obstacle to implement of the e-municipality'	Interviews, Focus Group and Questionnaires.
Attitude Towards	Q27: 'Conviction' Q30: 'Humanity' Q31: 'Capacity of staff to deal with e-municipality' Q32: 'Capacity of all staff to deal with computer'	(Davis, 1989) and (Davis et al., 1989).

- **Perceived Ease of Use**

It is seen as the degree to which a person believes that the use of a particular system in them will be with limited effort, easy to understood and use (Al-adaileh, 2009). This factor will aim to determine the degree to which a person thinks about the extent of the efforts that he/she will have to put towards understanding of the use of the e-government portal. In other words, this factor will determine the ease with which people (municipal management and staff) believe that e-government is easier to use (Trawnih & Bechcoum, 2018). With regard to e-government services, perceived ease of use means a clear and easy to understand service, and capable of performing tasks according to citizens' needs (Lal, 2012). Perceived ease of use, in contrast of TAM, refers to the degree to which a person believes that using a particular system would be with limited effort (i.e., an application perceived to be easier to use than another is more likely to be accepted by users) as indicated by (Davis, 1989) .

- **Level of Technology Use and Availability**

The implementation of e-government services varies from country to country, due to various reasons. The availability of ICT infrastructure is one of the major concerns. Governments are increasingly using ICTs to provide services at convenient locations for citizens. In addition, the technology and its tools must exist before the introduction of electronic services to be delivered efficiently and effectively to the public (Lal, 2012).

- **Administrative and Management Support**

Management support is defined as receiving the approval and constant support of the management during the application and at the operational stage of a system (Al-adaileh, 2009). In addition, it was found that providing persons (municipal management and staff) with administrative support of the system has a positive impact on the attitude, the acceptance and adoption of the system. It is considered one of the most important factors that play a role in the successful application of technological systems, where inadequate administrative support is one of the obstacles to the successful application of information systems (Sebetci, 2015).

- **Level of e-Services**

Level of e-services is the domains of services that municipalities provide to citizens electronically through the municipality's official portal. The availability of e-services is one of the most important factors that help implement the e-municipality initiative. E-services must be available prior

to the launching of the e-municipality initiative so that users can use (municipal management and staff) it effectively. It's considered as a first step in the implementation of the initiative and its success.

- **Availability of Laws and Legislation**

The presence of laws and supporting regulations is a reason for the acceptance and adoption of electronic systems. It helps towards the success and optimal implementation of the new system.

Based on the previous analysis of the literature and considering the questionnaire proposed for the study, Table 5.1 shows the references, based on which the indicators and constructs were identified. In addition, the column (Item No.) shows the questions that measure and clarify construct (see Appendix B).

5.3 Hypotheses Development

According to the proposed model as shown in Fig. 5.1, and in order to study the acceptance and adoption of e-municipality in Palestine, seven hypotheses were proposed depending on an empirical research and systematic literature analysis. The inferential statistics will be conducted to test the significant effects and differences of the suggested study variables (i.e., perceived ease of use, level of technology use and availability, administrative and management support, level of e-services and availability of laws and legislation), and their relationship with the

dependent variable, which is the acceptance and adoption of e-municipality.

Level of technology use and availability, administrative and management support, level of e-services and availability of laws and legislation constructs were used as independent variables in a TAM-based model for e-municipality as considered this study. Other constructs of the model were typical constructs of TAM including attitude, perceived usefulness, perceived ease of use, which are frequently used in the literature.

Attitude construct was used as mediating variable, and this variable is a certain technology was conceptualized as the assessment of user's willingness to use that technology. Therefore, according to TAM, attitude is a predictor of technology use of a person (Davis, 1989) and (Davis et al., 1989). In other words, attitude towards using a new technology has a supposedly positive impact on the use of that system. Hence, the following hypotheses were proposed to inferentially test the suggested relationships:

- **H1: There is a significant effect of perceived usefulness on attitude towards e-municipality.**

The positive attitude towards perceived usefulness for e-municipality services leads to a positive attitude towards the adoption of technology, thus leads to the adoption and acceptance of e-municipality. H1 has been proposed to investigate the relationship between perceived usefulness and attitude.

- **H2: There is a significant effect of perceived ease of use on attitude towards e-municipality.**

The positive attitude towards perceived ease of use for e-municipality services leads to a positive attitude towards the adoption of technology. The attitude towards ease of use has been identified as a factor that directs future behavior or the cause of intent that eventually leads to a particular behavior. This variable would affect the actual use or acceptance of a computer system or technology. Thus it leads to the adoption and acceptance of e-municipality. H2 has been proposed to investigate the relationship between perceived ease of use and attitude.

- **H3: There is a significant effect of level of technology and availability on attitude towards e-municipality.**

ICT infrastructure availability such as Internet connection, software and e-portal, and level of technology use will positively affect the likelihood attitude of e-municipality service acceptance and adoption. H3 has been proposed to investigate the relationship between level of technology and availability and attitude.

- **H4: There is a significant effect of administrative and management support on attitude towards e-municipality.**

The availability of administrative and management support will positively affect the likelihood of the attitude to use the new technology and, thus leads to the acceptance and adoption of the e-municipality and the success

of its implementation. The management support measures selected are: to encourage management, to provide all necessary resources, to discuss problems associated with the system, to assess the optimal use of the system, to have sufficient knowledge of the system, awareness, and to provide human resources and competencies for the new systems. H4 has been proposed to investigate the relationship between administrative and management level and attitude.

- **H5: There is a significant effect of level of e-services on attitude towards e-municipality.**

The availability of e-services on the electronic portal of the new system will affect the likelihood that an individual attitude will adopt and accept the system. This research assumes that the provision of e-services and the related development provided by municipalities is a sign of the acceptance and adoption of the e-municipality and its success as well. H5 has been proposed to investigate the relationship between level of e-services and attitude.

- **H6: There is a significant effect of availability of laws and legislations on attitude towards e-municipality.**

The availability of laws and legislation in support of new technology will affect the likelihood of an individual's attitude to adopt and accept the system. This research assumes that the availability of laws and their support for the procedures and transaction of the municipality helps to

accept and adopt e-municipal systems and their success. H6 has been proposed to investigate the relationship between availability of laws and legislations and attitude towards.

- **H7: Attitude toward e-municipality has a positive and direct effect on the acceptance and adoption of e-Municipality.**

Based on those perspectives, a person's attitude could be related to using a new technology which leads to acceptance and adoption of the e-municipality. Subsequently, the hypothesis (H7) has been proposed to inferentially study the relationship between attitude and acceptance and adoption the e-municipality.

5.4 Conclusion

This chapter illustrates the proposed conceptual model behind this research based on the TAM model. The variables of the model were identified which are likely to lead to the acceptance and adoption of the e-municipality in the Palestinian municipalities.

Based on the proposed conceptual model, the hypotheses are examined, as presented in the coming chapter, as these have been formulated and developed.

Chapter Six

Research Data Analysis

6.1 Introduction

After data collection and gathering, data analysis is carried out based on the outcomes of the interviews and questionnaire. This chapter presents the quantitative and qualitative analysis, through transforming the raw data into meaningful results that will provide helpful information to achieve the study objectives.

The first section of this chapter discusses quantitative analysis. The aim of quantitative analysis is to provide a clear numerical position regarding the acceptance, readiness and adoption of the e-municipality initiative by the Palestinian municipalities'.

The second section of this chapter discusses the qualitative analysis of the study. It provides qualitative analysis of the part of the questionnaire that includes open ended questions, as well as the interviews with relevant persons in the e-municipality initiatives. This helps to shed a light on the challenges facing the proper implementation of the e-municipality and provide the best strategies for good implementation and the success of the e-municipality initiatives, and avoid the obstacles that hinder the optimal implementation of e-municipality.

6.2 Quantitative Analysis

This section discusses the results of the questionnaire designed in the previous chapter. As mentioned above, the aim of quantitative analysis is to offer a clear numerical stance with respect to the readiness, acceptance and adoption of the e-municipality in Palestine through TAM model, to assess the maturity and acceptance among the municipalities, and to evaluate the effectiveness of the use of the e-Municipality in the Palestinian municipalities. Moreover, the statistical program SPSS is used to analyze the quantitative data obtained from the filled questionnaires to conduct comparative analyses and get casual relationships between questionnaire elements.

6.2.1 Demographic Analysis

Demographic analysis is a means of research into the dimensions and dynamics of the model population. When looking for human factors in social sciences, demographic analysis is always useful in identifying the various indirect factors encountered when conducting the analysis (Alketbi, 2018).

A total 54 questionnaires were distributed by hand; six questionnaires for each municipality. All valid questionnaires were retrieved. Table 6.1 shows the demographic characteristics and general features of the study sample for this research.

Table 6.1: Demographic Characteristics

Variables/Details	Frequency	Percentage
<ul style="list-style-type: none"> • Gender <ul style="list-style-type: none"> ➤ Male ➤ Female 	38 16	70.4 29.6
<ul style="list-style-type: none"> • Age <ul style="list-style-type: none"> ➤ 25-35 ➤ 36-45 ➤ 46-55 ➤ More than 55 	17 25 9 3	31.5 46.3 16.7 5.6
<ul style="list-style-type: none"> • Qualification <ul style="list-style-type: none"> ➤ High School ➤ Diploma ➤ BA ➤ Postgraduate 	- 3 40 11	- 5.6 74.1 20.4
<ul style="list-style-type: none"> • Career Status <ul style="list-style-type: none"> ➤ Mayor ➤ Director ➤ Assistant Director ➤ IT Officer ➤ Others* 	1 9 4 9 31	1.9 16.7 7.4 16.7 57.4

Note: *This includes programmers, HR officer, PR officers, IT vice presidents, Financial Managers, Directors of Engineering Departments, Heads of the Departments, etc.

Several points are worth stating here in relation to Table 6.1. The female respondents accounted for 29.6% from the 54 valid cases, while the male respondents accounted for 70.4%. Those in the sample with age from 36-45 years form the highest percent all of 46.3%, while the lowest age range was those with age more than 55 years with a share of 5.6 %. Only 3 (5.6%) have below BA qualifications where around 74.1% have BA and above qualifications. Finally, regarding to the career status of municipality employee under study, 16.7% are (directors or IT officer), while the highest percentage was 57.4% for the other positions.

6.2.2 Measurement Model: Reliability and Validity Analysis

Studying the reliability and validity of the proposed conceptual model is important to assess its internal consistency and validity, and to ensure that model is reliable and valid to be used for other similar studies (Bagozzi, 2011).

6.2.2.1 Reliability Analysis

As mentioned, the reliability expresses the possibility that the questionnaire will give the same results if applied to the same sample under the same conditions. Given the questionnaires different questions, there is a need to assess questions reliability. While using SPSS, the Cronbach's Alpha value is a major and significant aspect of reliability.

The reliability coefficient of the study instrument was calculated in its overall dimension and proportions in a manner internal consistency, using the formula Cronbach Alpha. Traditionally, Cronbach's Alpha had been used to assess the inter-correlation for each construct's items, the value of more than 0.7 is considered to be a good reliability indicator (Hair et al., 2014).

To assess the consistency and reliability of the all of the constructs, Cronbach's Alpha coefficients were calculated for all of the constructs. As shown in Table 6.2, the Cronbach's Alpha coefficient of the proposed conceptual model is high at (0.833), while the Cronbach's Alpha of the constructs were above 0.70 the acceptable range recommended by the

literature and most above the 0.80 considered very good, indicating that the conceptual model enjoys with a good level of consistency and reliability if applied in other researches and studies.

6.2.2.2 Validity Test

In order to ascertain the validity of the content, the researcher examined a set of studies and research related to the study variables, and a number of measurements in similar samples, and was used in the formulation of the current questionnaire. In addition, to ascertain the face validity of the questionnaire, it was presented to two specialized academics. In light of their views, the questionnaires were modified in terms of deletion, addition and modification, so that the questionnaire will be finalized in five sections and 57 questions.

Table 6.2: Reliability Results

Variable	No. of Item	Cronbach's Alpha (α)
Perceived usefulness	3	0.700
Perceived ease of use	4	0.783
Level of technology use and availability	8	0.899
Administrative and management support	5	0.802
Level e-services	4	0.810
Availability of laws and legislation	3	0.608
Attitude towards	4	0.780
Reliability (α) for all Conceptual Model = 0.833		

The researcher also examined the honesty of internal consistency and construct validity. The internal consistency that represents all constructs and their questions was found by calculating the correlation matrix by calculating the Pearson coefficient. Table 6.3 shows the results of the

correlation matrix (internal consistency). The results showed correlation coefficients' ranging from 0.255 to 0.864 for constructs with the questions. As for construct validity, it was calculated by calculating Pearson coefficient between each construct and another. The correlation coefficients ranged from 0.214 to 0.889. Table 6.4 shows the results of the correlation matrix (construct validity), where these values for correlation coefficients are fairly appropriate.

Based on the results of reliability and validity of the proposed conceptual model, the model has a high degree of reliability and validity to a certain extent except for "availability of laws and legislation" (Reliability = 0.608, Validity = 0.214).

Table 6.3: Correlation Matrix Result (Internal Consistency)

Construct/Variable	R	Sig.
<ul style="list-style-type: none"> Perceived usefulness <ul style="list-style-type: none"> ➤ Q26: perception ➤ Q48: desire 	0.734** 0.810**	0.000 0.000
<ul style="list-style-type: none"> Perceived ease of use <ul style="list-style-type: none"> ➤ Q29: awareness ➤ Q44: safety system ➤ Q45: data privacy ➤ Q49: follow-up requests without come municipality 	0.708** 0.779** 0.778** 0.579**	0.000 0.000 0.000 0.000
<ul style="list-style-type: none"> Level of technology use and availability <ul style="list-style-type: none"> ➤ Q36: internet ➤ Q37: technical infrastructure ➤ Q38: specialize IT ➤ Q39: latest device ➤ Q40: computer device ➤ Q41: e-Portal ➤ Q42: updating municipality website ➤ Q43: computer connected to network 	0.721** 0.737** 0.758** 0.821** 0.680** 0.649** 0.730** 0.834**	0.000 0.000 0.000 0.000 0.000 0.000 0.000 .000
<ul style="list-style-type: none"> Administrative and management support <ul style="list-style-type: none"> ➤ Q22: awareness plan ➤ Q23: manual ➤ Q24: meetings and seminars ➤ Q25: need to raise awareness 	0.764** 0.807** 0.760** 0.255	0.000 0.000 0.000 0.063

➤ Q28: plans	0.684**	0.000
• Level of e-services		
➤ Q46: e-Payment	0.804**	0.000
➤ Q47: Municipality transactions are made through electronic system	0.676**	0.000
➤ Q50: transactions between municipality and others institutions are made through electronic system	0.745**	0.000
➤ Q51: Smartphone applications	0.636**	0.000
• Availability of laws and legislation		
➤ Q33: availability laws	0.487**	0.000
➤ Q34: availability laws cover all aspects e-municipality	0.302*	0.026
➤ Q35: Lacks of laws are obstacle to implement e-municipality	0.417**	0.002
• Attitude towards e-Municipality		
➤ Q27: conviction	0.280*	0.040
➤ Q30: humanity	0.864**	0.000
➤ Q31: capacity of staff o dell with e-municipality	0.766**	0.000
➤ Q32: capacity of all staff to deal with compute	0.801**	.000

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

*: Correlation is significant at the (0.05) level (2-tailed)

No stars: there is no correlation.

Table 6.4: Correlation Matrix Result (Construct Validity)

Constructs	R	Sig.
Perceived usefulness	0.394*	0.003
Perceived ease of use	0.899*	0.000
Level of technology use and availability	0.800*	0.000
Administrative and management support	0.758*	0.000
Level of e-services	0.733*	0.000
Availability laws and legislation	0.214	0.120
Attitude toward e-Municipality	.0753*	0.000

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

No stars: There is no correlation

These results are considered to be acceptable, because the study is exploratory, as these findings will be improved in future studies, with the development of the current conditions.

6.2.3 Hypotheses Testing

Linear regression analysis was applied to verify the validity of the seven hypotheses included in this research for the purpose of achieving the objectives of this study.

The linear regression analysis is a statistical procedure that allows the researcher to estimate the linear or straight relationship between two or more variables. This linear relationship summarizes the amount of change in one variable related to the change in a variable or other variables. The model can also be tested for statistical significance to test whether the observed linear relation may have arisen by accident or not (Gingrich, 2004).

The study hypotheses are:

- 1) H1: There is a significant effect of perceived usefulness on attitude towards e-municipality.
- 2) H2: There is a significant effect of perceived ease of use on attitude towards e-municipality.
- 3) H3: There is a significant effect of level of technology use and availability on attitude towards e-municipality.

- 4) H4: There is a significant effect of administrative and management support on attitude towards e-municipality.
- 5) H5: There is a significant effect of e-services on attitude towards e-municipality.
- 6) H6: There is a significant effect of availability of laws and legislation on attitude towards e-municipality.
- 7) H7: Attitude towards e-municipality has a positive and direct effect on the acceptance and adoption of e-municipality.

In the context of the Palestinian municipality, it is assumed that the ease of use of the technology and the e-municipality affects the perceived usefulness from the implementation of the e-municipality. Thus, it will make it easier to access e-services, thus affecting the acceptance and adoption of e-municipality.

Table 6.5 shows the results of testing of the hypotheses adopted in the study to assess the acceptance and adoption of the e-municipality.

Table 6.5 shows the results of the impact of factors affecting the individual's attitude towards e-municipality on the adoption and acceptance of e-municipality. Regression analyses were used to explain the attitude of individuals towards the adoption and acceptance of the e-municipality.

Table 6.5: Hypothesis Testing Results on Attitude towards e-Municipality

No.	Construct	Unstandardized Coefficient		T-test		F-test		R	R ²	95% Confidence Interval for B	
		B	Std. Error	T	Sig.	F	Sig.			Lower Bound	Upper Bound
H1	Perceived usefulness	0.364	0.118	3.094	0.003	9.571	0.003	0.394	0.155	0.128	0.601
H2	Perceived ease of use	0.651	0.047	14.004	0.000	196.122	0.000	0.889	0.790	0.558	0.745
H3	Level of technology use and availability	0.588	0.061	9.605	0.000	92.248	0.000	0.800	0.640	0.465	0.711
H4	Administrative and management support	0.511	0.061	8.389	0.000	70.381	0.000	0.758	0.575	0.389	0.633
H5	Level of e-services	0.341	0.044	7.771	0.000	60.394	0.000	0.733	0.537	0.253	0.428
H6	Availability of laws and legislation	0.162	0.103	1.581	0.120	2.500	0.120	0.214	0.046	-0.044	0.369

The perceived usefulness ($B=0.364$) was a weak determinant of attitude towards e-municipality; the correlation coefficient R was 0.394 at the level of significance $\alpha \leq 0.05$. The coefficient of determination R^2 was 0.155, which means that the perceived usefulness explains 15.5% variance in the attitude towards e-municipality, leading to a weak correlation and significant relation at the 0.05 level. Consequently, the first hypothesis was rejected.

The perceived ease of use ($B=0.651$) was a strong determinant of attitude towards e-municipality; the correlation coefficient R was 0.889 at the level of significance $\alpha \leq 0.05$. The coefficient of determination R^2 has reached 0.790, which means that the perceived ease of use explains 79.0% of the variance in the attitude towards e-municipality, leading to strong correlation, as the perceived ease of use had a significant effect on attitude towards e-municipality.

The results of the statistical analysis showed the presence of statistically significant impact of level of technology use and availability, administrative and management support and level of e-services on attitude towards e-municipality, resulting in positive attitude towards adoption and acceptance of e-municipality, with a correlation coefficient R of 0.800, 0.758 and 0.733, respectively, at the level of significance $\alpha \leq 0.05$. The coefficient of determination R^2 was 0.640, 0.575 and 0.537, respectively. This means that these constructs explain most of the variance of the attitude towards the adoption and acceptance of e-municipality.

The results of the statistical analysis showed no statistically significant impact of availability of laws and legislation on attitude towards e-municipality, where there was a weak correlation with the attitude towards adoption and acceptance of e-municipality, with a correlation coefficient R of 0.214 at the level of significance $\alpha \leq 0.05$. The coefficient of determination R^2 was only 0.046, which means that the only 4.6% of the variance of the attitude towards e-Municipality is explained by the availability of laws and legislation of use, leading to weak correlation. Consequently, the sixth hypothesis was rejected.

Table 6.6 shows the results of the seventh hypothesis test of the hypotheses of the study "Attitude towards e-municipality has a positive and direct effect on the acceptance and adoption of e-municipality" (i.e., in order to assess the acceptance and adoption of the e-municipality).

Table 6.6: Hypothesis Testing Result for H7

H. No.	Construct	Unstandardized Coefficients		T-test		F-test		R	R²	95% Confidence interval for B	
		B	Std. Error	T	Sig.	F	Sig.			Lower Bound	Upper Bound
H7	Attitude Towards e-Municipality	0.441	0.053	8.258	0.000	68.202	0.000	0.753	0.567	0.334	0.548

Simple regression analysis was performed for attitude towards e-municipality, as it is the determinant variable posited by the literature. TAM model explained of the attitude towards e-municipality explained up to 56.7% of variance the acceptance and adoption of e-municipality, leading to a positive and strong correlation.

Based on the results of the hypothesis testing, the statistically accepted results the sig. are 0.000, where all hypotheses were accepted except for the first and sixth hypothesis that holds sig. of 0.003 and 0.120, respectively. Table 6.7 summarizes the results of the hypotheses testing of the study.

Table 6.7: Conclusion on the Research Hypothesis

Hypothesis	Result
H1: There is a significant effect of perceived usefulness on attitude towards e-municipality.	Reject
H2: There is a significant effect of perceived ease of use on attitude towards e-municipality.	Accept
H3: There is a significant effect of level of technology of use and availability on attitude towards e-municipality.	Accept
H4: There is a significant effect of administrative and management support on attitude towards e-municipality.	Accept
H5: There is a significant effect of level of e-services on attitude towards e-municipality.	Accept
H6: There is a significant effect of availability of laws and legislation on attitude towards e-municipality.	Reject
H7: Attitude towards e-municipality has a positive and direct effect on the acceptance and adoption of e-municipality.	Accept

Figure 6.1 illustrates the results of the study hypotheses of the proposed conceptual model for assessing the acceptance and adoption of the e-municipality.

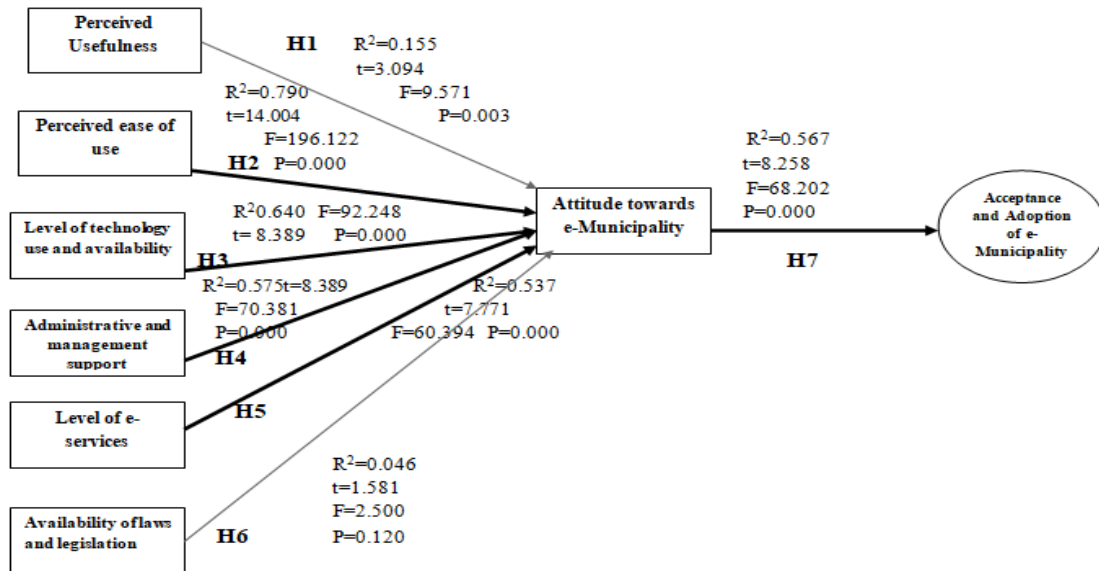


Figure 6.1: Hypothesis Result for Conceptual Model

6.3 Qualitative Analysis

This section discusses the results of the qualitative analysis of part the questionnaires as for open ended questions, as well as interviews with relevant persons in the e-municipality. The researcher used qualitative analysis of the data to identify subjects, to obtain complementary opinions of the “actors in the implementation process”. The researcher “purposively” sampled from a selective manager of functional characteristics, including IT managers, finance managers, and human resources managers to obtain correct information related to the e-municipality initiative.

6.3.1 Qualitative Analysis: Interviews

Many local government institutes lack awareness of the concept of "e-municipality". However, local authorities, especially municipalities, deal with the e-municipality as an automated internal process, or have a website or use of e-mail only. During the last few years, several municipalities have begun automation of their operations through the implementation of several projects such as the implementation of financial systems and billing and archiving systems, such as the municipalities of Hebron, Nablus, Bethlehem and Ramallah.

To get more information about the municipalities' achievements in e-municipality, the interviews were performed with representatives from the MOLG, MDLF and GIZ.

Recently, municipalities are noticed to have a good infrastructure and relevant IT literacy, and have allocated budgets and resources to deal with the concept of e-municipality. Therefore, a number of the municipalities have started to adopt the e-municipality system, especially the large Palestinian municipalities. Being e-municipality is becoming one of the main strategic goals of a number of municipalities that they want to achieve as soon as possible, which will provide their services electronically to their beneficiaries.

According to MOLG and MDLF, there is no specific strategy for the e-municipality within municipalities. However, the e-municipality realization is included in some of the general municipal strategic plans. This became as one of the strategic goals of such strategic plan, which the municipalities want to achieve during the next few years. It can be concluded from the study of a number of strategic plans for the municipalities that the local authorities deal with the e-municipality as part of the institutional development and administrative development. For example, e-municipality was incorporated under the strategic objective of "Institutional Development and Capacity Building for Operational Excellence" under the supervision of the Administrative Affairs.

MOLG, in collaboration with MDLF and donors, is making significant efforts in the areas of transition to e-municipalities, including projects for the supply of financial systems, public service center projects, and pilot projects for e-municipality systems and others. The interest of ministries in e-transformation at the local level is in line with the national transformation towards and integration with e-government.

Integration with e-government requires the use of government transporter electronic data (X-Road), either directly or indirectly, and requires the provision of the required infrastructure and systems at the level of both local authorities as well as the MOLG. In terms of infrastructure, there is a need for a secure network linking local authorities with government institutions, providing adequate communication speed for data transmission

between municipalities and government institutions, and providing a high degree of protection. This is in addition to the need to update and develop the computerized systems used in the municipalities to meet the requirements of connectivity with e-government.

The conclusion is that the main and common activities, services and transactions for most local municipalities provided for their customers, might potentially be developed through implementing e-municipality project in the municipalities.

The municipality's electronic system will facilitate interaction between citizens and the municipality by using accessible online media. The municipality can use the electronic system to monitor the interaction of citizens with their municipality via the Internet to enable them to access online services effectively and efficiently, as well as to enable them to see their data and the status of the services they seek more easily. E-municipal system covers the life cycle of a service, including invoicing and the ultimate online payment (not implemented fully).

The services that the municipalities provide differ in their quantity and quality from one municipality to another. These entire services are gathered and provided nowadays in one place in the municipality, which is called the One Stop Shop (OSS), or the Public Service Center. This is one of the most important steps to become an e-municipality.

The OSS is the first and only place for citizens to finish their work without having to visit other departments, by receiving the request from the citizen, specifying its type, and then sending it to the appropriate section through the program. The OSS consists of integrated computer systems, software and sequential procedures, making processing applications and transactions easy, and ensuring rapid processing. Upon completion of all procedures, the application is returned to the Center as a final stop where the citizen is notified in writing of the approval or rejection of his/her request.

Besides, the municipalities have built their websites, which vary from municipality to municipality according to the content, subject matter, quantity and quality of information that is presented to citizens. Through the study, many Palestinian municipalities were found to have websites. Other municipalities, which do not have websites, are seeking to activate these sites soon.

While most municipalities' websites are utilized to display general information about the municipality, the city, the activities and news occurred there in all aspects; later a new feature had been added to Ramallah, Hebron, Beit Jala and Halhoul Municipalities' websites; the Electronic Portal. The e-portal is the first phase of providing services electronically in a secure and privacy framework. Now this feature allows the citizens to enter their files and transactions, and review and check the fees due. This feature is developing to include later, the ability to display all services provided by the municipality and having an access to apply and

to get specific services directly through the municipality portal, in addition to making payment electronically through different tools such as the credit card. The municipality provides users with access the electronic services with a user name and a password so that they can use the municipal portal and its features.

6.3.2 Qualitative Analysis: Questionnaires and Municipalities Websites

This section presents some of the experiences of selected sample of the Palestinian municipalities in the application and implementation of the e-municipality. The basic criterion in sample selection is the level of e-municipality implementation (high, medium and low level), geographical distribution of municipalities (north, center and south) and municipal size (large, medium and small). This can be refer to the MOLG classification in order to determine the level of application of e-municipality within municipalities.

Besides this, the analysis of municipality achievements in e-municipality is discussed. For information on e-municipality issues, the targeted municipalities' websites have been analyzed. In addition, an analysis is conducted on qualitative data from open ended questions in the questionnaire distributed to representatives of Hebron, Salfeet, Ramallah, Dura, Jenin, Bethlehem, Beit Jala, Halhoul and Nablus Municipalities. The websites analyzed include the proposed municipalities for the study.

To examine the status of e-municipality at the local authorities and the status of the nine involved municipalities' experiences in the field of transformation towards e-municipality is studied and evaluated to assess the reality, readiness, acceptance and adoption of the e-municipality, as well as the status of development transformation towards the e-municipality.

The readiness, acceptance and adoption of e-municipality by the indicated municipalities are studied and assessed, based on the following assessment criteria with the sub-themes:

1. Evaluation of the e-municipality from the administrative point of view:
 - General understanding of the e-Municipality initiative.
 - The commitment of the administrations to implement the e-municipality.
 - Procedures and processes followed.
 - The human capabilities and competencies of the e-municipality initiatives.
2. Technological evaluation of the e-municipality:
 - Information and communication technology infrastructure.
 - Information Systems security.

3. Evaluation of e-municipality in terms of e-services provided:

- The existence of the portal for e-services.
- The number of e-services compared with the total number of services in the municipality.
- Use of smart phone applications to provide e-services.
- Availability of e-payment.

The commonality of all municipalities of the study is the provision of services to citizens, but each municipality differs in the quality of service and how to provide it. In addition, the websites are available to all municipalities, with each municipality being unique in its content from other municipalities. Technological infrastructure varies among the municipalities, as each municipality is distinct from the other in this area. The singularity of each municipality is reflected separately.

6.3.2.1 Ramallah Municipality

Ramallah Municipality was founded in 1908, which provides its services and cultural and community programs to the citizens (Ramallah Municipality, 2012). Ramallah Municipality is classified by MOLG as "A Municipality".

Ramallah Municipality is one of the Palestinian municipalities that started the implementation of the e-Municipality initiative since 2012, to raise the level of performance and efficiency, and develop tools to facilitate the delivery of services to citizens through the Internet quickly and effectively.

❖ **Administrative evaluation to accept and adopt the e-Municipality:**

The Municipality of Ramallah has a good awareness of the advantages and benefits of using and implementing the electronic municipality. The municipality has plans to raise awareness of the municipality's services provided electronically. Several meetings and conferences have been held on the e-municipality with the participation of several ministries and other municipalities. The Municipality of Ramallah provides a directory of e-services and how to apply for the service as one of its procedures to implement the e-municipality initiative. In 2006, the OSS has been working to control the progress of transactions in the various departments of the municipality through the information flow program, where the employees can inquire about the progress of transactions and helps to maintain transactions in a safe manner. The municipality of Ramallah has a distinguished staff in the performance of its tasks, capabilities and human competencies.

Since 2012, the municipality of Ramallah is seeking to success of the e-municipality. The municipality has implemented a number of projects related to the e-Municipality initiative, including build a large database and unified citizens, computerization of the activities of the municipality where

every citizen can easily access his/her own information, using well developed Geographic Information Systems (GIS), modernization of the Center for Public Services to provide the best services to citizens, electronic archives, in addition to training staff working in the municipality of Ramallah and others.

❖ **Information Technology in the Municipality:**

The technological development and openness of the citizens in the city of Ramallah are among the reasons that prompted the municipality to implement the e-municipality initiative. Within the framework of the Municipality of Ramallah in developing the service and improving performance in 2005, the Public Services Center was established as one of its steps in the development of the municipality's technology. The municipality has a very high ICT infrastructure. The municipality's IT Department is working to improve the use of modern technology and employ it to meet the needs of the citizen.

❖ **E-services provided by the Municipality:**

As part of the e-municipality initiative, through which the municipality seeks to achieve its vision of implementing an effective e-service system that leads to the completion of the municipality's efforts to electronically facilitate citizens services, all public services have been computerized to be made available to the citizens through the “e-services of the municipality of Ramallah”. This will facilitate the citizen to be able to fill and submit

his/her application to the municipality electronically, and will soon be allowed to track the path of applications and payment and receipt electronically. The municipality provides a wide range of services through the e-services portal. These services include inquiries and complaints, view citizens' bills, services of crafts and, industries and licenses, certificate services, health and environment services, GIS and road, transport and transportation services. In addition, the municipality has developed smart phone applications to offer and access services electronically using mobiles.

6.3.2.2 Hebron Municipality

Hebron Municipality was founded in 1908, which is largest establishment in city as of the size of the workforce (Hebron Municipality, 2019). This was reflected in the development of the city. Hebron Municipality classified by MOLG as "A Municipality".

The Hebron Municipality has worked on automating its operations and procedures from manual to electronic in order to facilitate the work of employees and citizens and provide service at the lowest cost, fastest time and high quality.

❖ Administrative assessment to accept and adopt the e-Municipality:

The e-Municipality started in the Hebron Municipality in 2016. Among the projects that have been implemented to reach the e-municipality is the development of the principles of good governance, where modern

management depends on a comprehensive development of the organization in order to organize the various strategic and operational processes to achieve stability and sustainability of the institution, which is the best way to reach the e-municipality. The results of the implementation of an institutional development project in the municipality can be summarized by comprehensive integrated processes and information systems that include procedures and work instructions that regulate all areas of work in the municipality, and give high leadership performance indicators that enable its users to assess the performance and strategic planning of the municipality and keep pace with the technological and technical development within the municipality. Besides, training and development of the staff in the municipality, where the municipality aims to improve the performance of staff and training them to deal with the e-municipality, had led to improving the provision of services to citizens and raising the level of performance of the municipality (HOPE & NCD, 2018).

The municipality has an awareness and perception of the advantages of the e-municipality, and therefore, it seeks to implement it. The municipality has a competent staff and has the ability to deal with municipal electronic systems. In addition, the municipality works continuously to improve the performance of its employees in order to improve the municipal efficiency. Hebron Municipality provides an e-services guide to complement its administrative and financial development and to achieve the goal of improving the efficiency of the services provided.

❖ Information Technology in the Municipality:

Within the direction of the Municipality of Hebron in developing and improving the service provided to citizens, the Department of Public Services seeks to achieve its objectives. In addition, the municipality has a high-level ITC infrastructure. The Information Technology Department develops information access and technological methods to develop and improve the planning processes, and access to the service electronically, by providing a common database between the municipal departments and relevant institutions.

❖ E-services in Hebron Municipality:

Hebron Municipality provides many electronic services through an e-portal for services. These services include water and electricity services, building services, sewerage services, services of crafts and industries, fees and taxes services, certificates (such as proof of housing, practicing a profession, owning a real estate, etc), public transport services, inquiries and complaints services, and GIS services.

In addition, the municipality uses smart phone applications to provide services and facilitate access to service for citizens.

6.3.2.3 Nablus Municipality

In 1869, the municipality of Nablus was established as one the first Palestinian municipalities. The municipality is considered one of the largest Palestinian institutions in terms of the size of services provided to citizens, the number of implemented projects, and the size and efficiency of administrative and technical staff who supervise the management of municipal projects (Nablus Municipality, 2016). Nablus Municipality classified by MOLG as "A Municipality".

❖ Administrative assessment to accept and adopt the e-Municipality:

The Municipality has a perception and awareness of the advantages of the e-municipality. Therefore, the municipality seeks to implement the initiative. The municipality has a well-trained staff and has the ability to deal with municipal electronic systems in order to improve the municipality's institutional efficiency. The Municipality of Nablus provides an e-services guide to complement its administrative and financial development and to achieve the goal of improving the efficiency of the services provided.

❖ Information Technology in the Municipality:

Within the direction of Nablus Municipality in developing the service, improving performance, keeping pace with development and providing quality service to the citizen, the Public Services Center was established, which is one of the most modern public service centers in the country. The

Nablus Municipality has rehabilitated the infrastructure of computerized systems and provided a fast and strong network in addition to the equipment that are compatible with the provision of service and integration between the systems, as well as simplifying the work and facilitating communication with citizens in order to facilitate the work of employees and citizens and provide service at the lowest cost, and the fastest time, and highest quality. In addition, the municipality has a high-level information technology infrastructure. The municipality works to develop methods of obtaining information and following up the technological development to improve planning processes and access to the service electronically.

❖ **E-services Offered in Nablus Municipality:**

The Municipality of Nablus offers many e-services through an e-portal to the municipality. These services include water services, building services, sewerage services, services of crafts and industries, fees and taxes services, public certificate services, services for advertising on public transport, and inquiries and complaints.

6.3.2.4 Bethlehem Municipality

The Municipality of Bethlehem is one of the Palestinian municipalities that are working on implementing the e-municipality initiative in its process. The municipality began implementing the project in 2016 as a first step in its quest for administrative development in the institution. Bethlehem Municipality is classified by MOLG as "A Municipality".

❖ **Administrative assessment to accept and adopt the e-Municipality:**

The Municipality of Bethlehem has been preparing a plan for the institutional development of the municipalities since 2013 to develop the municipality, its works, services and systems to reach e-municipality (Bethlehem Municipality, 2014). The municipality has an awareness of the advantages of the electronic municipality, so the municipality seeks to implement the initiative. The municipality has well-trained staff and has the ability to deal with municipal electronic systems in order to improve the municipality's institutional efficiency. In addition, the municipality is working to provide a directory of public services to citizens as one of its procedures in becoming an e-municipality.

❖ **Information Technology in the Municipality:**

The IT Department in the Municipality of Bethlehem works to improve the utilization of modern technology and employ it to meet the needs of the municipality in the daily work, through the use of information systems that contribute to the process of improving productivity and raise the quality and ensure efficiency in the performance of municipal employees. The department was established in 2014 due to the municipal awareness of the importance of the role played by this section in the municipality from the management and linking of the systems and raise the level of competence of employees and increase transparency and management of information on which the municipality and even help in decision-making. Within the framework of Bethlehem municipality's directions to develop the service,

improve performance, keep pace with development, and provide quality service to the citizens, the Public Services Center was established in 2013. In addition, the municipality has a high-quality information technology infrastructure. The municipality works to develop methods of obtaining information and technological development to improve planning processes and access to services electronically.

❖ E-services Offered in Bethlehem Municipality:

Bethlehem Municipality offers many electronic services through an electronic portal to the Municipality. These services include water and electricity services, building services, sewerage services, services of crafts and industries, fees and taxes services, public certificate services, and inquiries and complaints.

6.3.2.5 Dura Municipality

The Dura Municipality started implementing the initiative at the end of 2015. With the beginning of 2016, the first step in its quest for administrative development in the institution was observed. The municipality has prepared an integrated financial system and the infrastructure of the systems and it has computerized most of its procedures and systems in order to facilitate the work of employees and citizens and provide service at the lowest cost and fastest time and high quality. Dura Municipality is classified by MOLG as "B Municipality".

❖ Administrative assessment to accept and adopt the e-Municipality:

The Municipality of Dura began work on the e-Municipality project, starting with the implementation of a set of computerized systems in the municipality (general financial system, warehouse system, procurement system, GIS and fixed assets, billing system). The municipality has an awareness of the advantages of the e-municipality, so the municipality seeks to implement the initiative. The municipality has well-trained staff and has the ability to deal with municipal electronic systems in order to improve the municipality's institutional efficiency.

❖ Information Technology in the Municipality:

The IT Department in Dura Municipality works to improve the utilization of modern technology and employ it to meet the needs of the municipality in the daily works, through the use of information systems that contribute to the process of improving productivity and also ensures efficiency in the performance of municipal employees. Within the direction of the Municipality of Dura in the development of the service and of improvement the performance and continuity of keeping pace with development and provide quality service to the citizen, the service center public was developed three years ago. In addition, the municipality has a good ICT infrastructure, where the municipality is working on developing methods of obtaining information and monitoring technological development, and to improve planning processes and access to the services electronically.

❖ **E-services Offered in Dura Municipality:**

Dura Municipality offers many e-services through the municipal portal. These services include water services, building services, sewerage services, services of crafts and industries, fees and taxes services, certificate services, advertising services, and inquiries and complaints. In addition, Dura Municipality uses smart phone applications to offer and provide services in order to facilitate access to services in the shortest time, as a step towards becoming an e-municipality.

6.3.2.6 Salfeet Municipality

The Salfeet Municipality began implementing the initiative in 2013 as a beginning in its quest for administrative development in the institution. The municipality has been keeping abreast of technological developments the computerization of all sections of the municipality and the linking of administrative, financial and technical programs with each other. The municipality is classified by MOLG as "B Municipality".

❖ **Administrative assessment to accept and adopt the e-Municipality:**

The municipality has an awareness of the advantages of the e-municipality, so the municipality seeks to implement the initiative. The municipality has well-trained staff and has the ability to deal with municipal electronic systems in order to improve the municipality's institutional efficiency. The municipality also prepared a guide to the services it provides and how to apply for these services in order to regulate the mechanism of dealing with

the services and facilitate the citizen's contact with the municipality. In order to complete the process of institutional development in the municipality, the municipality uses a financial system produced by the Experts company works on Oracle, as well as all the operations of accounts, assets, salaries and others also pre-payment system for electricity and these systems are interrelated.

❖ **Information Technology in the Municipality:**

The IT Department in Salfeet Municipality is working to improve the utilization of modern technology and employ it to meet the needs of the municipality through the use of information systems that contribute to the process of improving productivity to ensure efficiency in the performance of municipal employees. Within the direction of Salfeet Municipality in developing the services, improving the performance, keeping pace with development, and providing quality service to the citizen, the Public Services Center was developed. In addition, the municipality has a good ICT infrastructure, where the municipality is working on developing methods of obtaining information and monitoring technological development and improves planning processes and access to the service electronically.

❖ **E-services Offered in Salfeet Municipality:**

Salfeet Municipality offers many electronic services through the municipal portal. These services include water and electricity services, sewerage

services, services of crafts and industries, fees, taxes and billing services, certificate services, and inquiries and complaints services. In addition, Salfet Municipality uses smart phone applications in order to facilitate access to services as a step towards becoming an electronic municipality.

6.3.2.7 Beit Jala Municipality

The Beit Jala Municipality has been carrying out technological developments, providing equipment and devices and raising the staff's ability to upgrade to an e-municipality, in order to facilitate the work of employees and citizens and provide service at the lowest cost, time and high quality. Beit Jala Municipality is classified by MOLG as "B Municipality".

❖ Administrative assessment to accept and adopt the e-Municipality:

The municipality has an awareness of the advantages of the e-municipality, so the municipality seeks to implement the initiative. The municipality has well-trained staff and has the ability to deal with municipal electronic systems in order to improve the municipality's institutional efficiency. The municipality also proposed a directory of the services provided by the municipality and the required documents to complete the requirements for obtaining the service and the procedures and the course of work followed by the municipality in addition to the time necessary to accomplish them in order to regulate the mechanism of dealing with services and facilitate the process of communication with the municipality.

❖ Information Technology in the Municipality:

The IT Department in Beit Jala Municipality is working to improve the utilization of modern technology and employ it to meet the needs of the municipality through the use of information systems that contribute to the process of improving productivity and also ensures efficiency in the performance of municipal employees. Within the direction of the Municipality of Beit Jala in the development of service and improvement of the performance and continuity to keep pace with the development and the providing of quality service to the citizen, it developed the Center for Public Services in 2011. In addition, the municipality has a good ICT infrastructure, where the municipality is working on developing methods of obtaining information and monitoring technological development to improve planning processes and access to the service electronically.

❖ E-services Offered in Beit Jala Municipality:

The Municipality of Beit Jala provides many e-services through the municipality's e-portal, which is still in operation. These services include water and electricity services, sewerage services, crafts and industries, fees, taxes and billing services, certificate services, health and environment services, and inquiries and complaints.

6.3.2.8 Halhoul Municipality

Municipality of Halhoul is working on the implementation of the e-municipality initiative where the municipality began to implement the project in 2016 as a beginning in the pursuit of administrative development in the institution, but has made a reservation about allowing documents to be submitted online. The municipality has been carrying out technological developments, providing equipment and raising the staff's ability to upgrade to an e-municipality.

❖ Administrative assessment to accept and adopt the e-Municipality:

The municipality has an awareness of the advantages of the e-municipality, so the municipality seeks to implement the initiative. The municipality has a good staff that has the ability to deal with e-municipality systems in order to improve the municipal efficiency of the municipality. The municipality also proposed a directory of the services provided by the municipality and the required documents to complete the requirements for obtaining the service and the procedures and the course of work followed by the municipality in addition to the time necessary to accomplish them in order to regulate the mechanism of dealing with services and facilitate the process of communication with the municipality.

❖ Information Technology in the Municipality:

The IT Department of Halhoul Municipality is interested in using the latest technologies in the management and security of networks, databases and information systems. The department deals with all information technology in the municipality. The IT Department in Halhoul Municipality is seeking to improve the utilization of modern technology and employ it to meet the needs of the municipality through the use of information systems that contribute to the process of improving productivity. It also ensures the efficiency of the municipal employees' functional performance and the conversion of all services, systems and applications from the traditional (paper) to electronic process. Within the direction of the Municipality of Halhul in the development of service and improve performance and continuity to keep pace with development and provide quality service to the citizen was developed public service center. In addition, the municipality has a good ICT infrastructure, where the municipality is working on developing methods of obtaining information and monitoring technological development to improve planning processes and access to the service electronically.

❖ E-services Offered in Halhoul Municipality:

The Municipality of Halhoul offers a number of e-services through the municipality's e-portal, which is still under development. These services include water and electricity services, sewerage services, crafts and

industries, fees, taxes and billing services, public certificate services, health and environment services, and inquiries and complaints.

6.3.2.9 Jenin Municipality

Municipality of Jenin began to implement the project in 2016 as a beginning in the pursuit of administrative development in the institution. The municipality has been carrying out technological developments, providing necessary equipment and increasing the ability of employees as much as possible to reach an e-municipality. Jenin Municipality is classified by MOLG as "A Municipality".

❖ Administrative assessment to accept and adopt the e-Municipality:

The municipality has an awareness of the advantages of the e-municipality, so the municipality seeks to implement the initiative as much as possible. The municipality of Jenin suffers from the weakness of the staff and the specialists in the field of IS of the municipality, in addition to the weak commitment of the administration and staff in the implementation of the e-municipality.

❖ Information Technology in the Municipality:

The Information and Communications Technology Department is trying to keep pace with the development of the Jenin Municipality to the level of the e-municipality, but because of the weakness and lack of IT staff, as well

as weakness in the technical infrastructure, there are obstacles to the development of the e-municipality.

❖ **E-services Offered in Jenin Municipality:**

The citizen continues to go to the public services center in order to obtain his services. Services provided electronically are only complaints services.

6.3.3 Overall Assessment of the Studied Municipalities

In this section, the overall assessment of the previously analyzed municipalities is presented to check their readiness, acceptance and adoption of the e-municipality initiative. The assessment of the status of e-municipality in each of the studied the municipalities as based on the three assessment criteria with its sub-themes mentioned in the previous section.

Table 6.8 summarizes the overall assessment of the level of e-municipality in the studied municipalities. Based on the previous analysis for each of the municipalities, ranking is divided in three categories, and then the overall assessment of each municipality is conducted (high, medium and low). This depends on the administrative, technological assessment and the e-services provided in the municipality.

While each of the three assessments criteria, with scores of (3, 2 or 1 stars), the total score of the three assessments criteria is with a maximum of 9 stars. If the municipality scores in the three assessments range from 7-9 scores, this indicates a high level of application of the e-municipality.

However, if it ranges between 4-6 scores, the municipality's application of the e-municipality initiative is medium. Finally; if the assessment of the municipality is 3 or below, the level of the e-municipality is low.

Table 6.8: Conclusion the e-Municipality Level

Municipality	Administrative Assessment	Technology Assessment	e-Services Assessment	Overall
Ramallah	***	***	***	High
Hebron	***	***	**	High
Nablus	***	***	**	High
Bethlehem	**	**	**	Medium
Dura	**	**	**	Medium
Salfeet	***	***	**	High
Beit Jala	***	**	**	High
Halhoul	**	**	**	Medium
Jenin	**	*	*	Low

Note: ***: High Level

** : Medium Level

* : Low Level

6.4 Conclusion

In this chapter, quantitative and qualitative analysis was presented. The results showed that some TAM model variables positively and directly affect the attitude towards acceptance and adoption of e-municipality (PU, PEOU, level of technology use and availability, administrative and management support, level of e-services and attitude). However, the variable related to the availability of laws and legislation does not have a positive effect on the acceptance and adoption of e-municipality.

Therefore, to increase readiness of the municipalities to adopt e-municipality, requires increasing their awareness about the advantages of using the electronic platform. Another key to the successful implementation of the e-municipality would be to increase public trust on using technology for the transactional purpose. In addition, the e-municipality must be implemented and linked to the Public Services Center; the two systems should become an integrated system on the Internet. Also; linking and consolidating databases, where the integration of citizen records through departments and systems within the municipality is a complex process that must be completed before implementing the e-municipality.

In light of this, all the hypotheses of the study were accepted with the exception of "There is a significant effect of availability of laws and legislation on attitude". This is due to the great challenges of the municipalities in the current time to adopt the direct e-payments and this is due to the lack of regulations to activate the e-transactions law in the field of regulating e-payments, to the legal environment supporting it, as well as the lack of a legally secure infrastructure for conducting electronic movements.

In addition, three criteria were identified with sub-themes to assess the acceptance and adoption of the e-municipality by the Palestinian municipalities as mentioned earlier. The nine studied municipalities were then analyzed and the three assessment criteria applied.

Chapter Seven

Strategic Analysis for E-Municipality

7.1 Introduction

In the previous chapter, the outcome of the quantitative and qualitative analysis of the gathered data was presented. Based on this, the internal and external environment of the Palestinian municipalities is examined in this chapter. Consequently, the key issues that affect e-municipality are identified, so that Palestinian municipalities can overcome the challenges and best implement the e-municipality.

Through this, the main strategic objectives will be identified for the optimal implementation of the e-municipality. In addition, the key success factors that will help Palestinian municipalities to overcome and avoid the challenges facing the optimal implementation of the e-municipality will be identified.

7.2 SWOT Analysis

Considering all the information gathered and analyzed from various sources as presented in Chapter Six, it is found that a number of factors worth further studying. Some of these factors are encouraging where there are strengths that must be supported to take advantage, and opportunities that must be seized. However, there are some weaknesses and threats, which can negatively affect any developmental process towards the e-municipality and hinder its implementation.

The internal and external environments that are related to the e-municipality, whether they are negative or positive, must be considered. However, most of the following strengths, weaknesses, opportunities and threats are similar to most municipalities. SWOT analysis results are presented hereafter, based on TAM model results and qualitative analysis of interviews and questionnaire.

7.2.1 The Strengths

Some available strength must be supported, which have good impact on the implementation of the e-municipality initiative; those strengths are summarized as follows:

- 1) The existence of leadership support represented by a number of municipalities Mayors and the council members, who believe in the need for e-municipality and exhibit hard work to achieve this goal. In addition, there is desire of senior management in the majority of local bodies and perception of the importance of the development of services provided to citizens, such of the municipalities Hebron, Salfeet, Nablus and Ramallah.
- 2) Initial steps in a number of municipalities have been taken to move towards e-services due to the presence of public service centers and computerized systems.
- 3) The availability of internal financial support allocated by many Palestinian municipalities for the implementation and development of e-municipality.

- 4) The existence of general strategic plans in all the municipalities, including plans to reach the e-municipality, in many of these.
- 5) Availability of qualified staff in IT in most Palestinian municipalities, particularly the major municipalities of Hebron, Nablus, and Ramallah, as well as some smaller ones such as Salfet.
- 6) The commitment of municipalities in their procedures and operations to transform into an e-municipality through the provision of "e-services guide" in most studied municipalities to facilitate citizens' transactions, whether published on municipal sites such as Ramallah, Hebron and Salfet, or printed such as Beit Jala, Dura and Bethlehem.
- 7) Increased use of the Internet, computers and new and modern technologies in municipalities.
- 8) Increase municipal staff and the public attention to the importance of ICT.

7.2.2 The Weaknesses

Some weaknesses available that must be mitigated, and that have a negative impact on the implementation of the e-municipality initiative; those weaknesses are summarized as follows:

- 1) Poor awareness and understanding of senior management in local bodies about the importance and requirements of providing e-services.

- 2) The lack of enough leadership support for e-municipality initiative by the Mayors and council members for specific Palestinian municipalities.
- 3) There is a sense of resistance by some employees, because they believe that the use of computers and the internet will be against their benefits and personal privileges, and reduces their chances of getting more role and influence in their work.
- 4) The absence of clarity of procedures required for transactions and services in a number of municipalities, because this is an important stage in the e-municipality. The complexities of transactions and administrative procedures in providing services to the public delay the implementation of e-municipality.
- 5) Lack of sufficient technical staff capable of developing e-services, lack of sufficient expertise in some municipalities, as well as absence of administrative body or unit responsible for the subject of transformation to e-municipality.
- 6) The weakness of the technical capabilities (infrastructure) of some municipalities to support the concept of e-municipality.
- 7) The existence of computerized systems that are not connected or integrated together in most municipalities, especially with the financial system.

8) No provision of incentives for municipal staff to encourage the use of e-services in local bodies that provides these services. In addition, to the weakness of the role of the local authority in educating its citizens about the provision of e-services.

9) The weak link between the municipality's general strategic plan and ICT plan (if any).

10) Lack of executive regulations providing the required legal environment. In addition to the absence of clear policies for the transformation process.

11) There is no unified database within each of Palestinian municipalities except within a number of the largest ones.

12) Difficulty of co-operation between municipalities and related institutions such as banks and other government institutions, where are no agreements between the municipalities and related institutions, nor there is readiness of both sides for such cooperation, (e.g., on payment of fees and invoices through e-payment services).

7.2.3 The Opportunities

Some available opportunities must be benefited, which have good impact on the implementation of the e-municipality initiative; those opportunities are summarized as follows:

- 1) Increased interest at the government level to the transformation to an e-government. In addition, strategic plans are available to transform into e-government with the help of MTIT.
- 2) The MOLG and MDLF have been supporting developing the municipalities' capabilities including in e-municipality, in addition to the presence of donor interest in supporting this area.
- 3) The existence of twinning with international municipalities that contributes significantly to the transfer of knowledge, experience and potential funding.
- 4) The potential for the development of the legal environment due to the governmental interest in e-government, which will also benefit in the regulatory environment for the e-municipality.
- 5) The existence of experience in IT in the private sector, which could contribute to better technical environment.
- 6) Accelerating technological development, which can contribute to the provision of e-services at a lower cost, beside the high level of computer literacy, and the expansion of technical and technological education.
- 7) Modernization and continuous development of the telecommunications and network infrastructure in Palestine at both the municipal and national levels.
- 8) The cumulative experiences in the technology field in Palestine.

9) Existence of a guide on "establishing and operating public service centers" in Palestinian municipalities.

10) The existence of an institutional umbrella for the Palestinian municipalities "APLA" with a good role in developing the capabilities of the municipalities towards the transformation into an e-municipality.

7.2.4 The Threats

There are a number of factors outside the internal framework of the municipalities which have negative consequences on the implementation of e-municipality initiative. The threats include the following:

- 1) Weak accesses to e-services due to the difficulty of using them are lack of confidence in them.
- 2) Political instability may adversely affect the provision of external support.
- 3) Lack of public awareness of the importance, role and benefits of e-municipality, which in turn creates resistance from the public towards change. This resistance has another reason, namely, public fear and lack of confidence in the preservation and use of their data and information in a safe and private environment.
- 4) Lack of legal legislation supporting the policies and procedures of electronic transformation in the Palestinian municipalities.

- 5) Lack of approved systems, mechanisms, and financial sources (government financial support) for government transfers to support and implement the strategies of Palestinian local authorities for e-transformation.
- 6) Difference, diversity of experience, and unequal capacity among the Palestinian local authorities.

7.3 The Key Issues and General Challenges for Implementing e-Municipality

In this section, the key issues and general challenges facing the optimal implementation of the e-municipality initiative in Palestinian municipalities are highlighted. After analyzing the current situation of the Palestinian municipalities, it was found that there are some outstanding issues to be highlighted, mainly the challenges facing the e-municipality that prevent and hinder the Palestinian municipalities from fully implementing the e-municipality. The primary research feedback on the subject has shown that the main challenges faced by Palestinian municipalities in implementing the e-municipality depend on management and technical challenges.

7.3.1 Management Challenges

The bulk of the challenges faced by the initiative arise from the slow and inefficient decision-making processes required to deal with contracts, plans

and the availability of resources in the municipalities. The management challenges can be summarized in the following points:

- 1- Lack of commitment of the administration and councils to the e-municipality initiative. In addition to the weakness of appropriate decisions by officials in the actual work in the e-municipality.
- 2- The succession of different municipality councils in a municipality, where each could have different plans and objectives, including those related to the priority of implementing the e-municipality initiative.
- 3- There is a problem in fully understanding the issue of e-municipality by the municipal management. Most of the municipalities had a misconception about the e-municipality, which is to create a website for the municipality on the Internet only to provide information about the municipality and its work.
- 4- Lack of real partnerships between the public and private sectors.
- 5- Poor public awareness among the administration and municipal staff of the concept of e-municipality and the culture of e-services.
- 6- A violation of the MDLF manual and directions for the implementation of the e-Municipality.
- 7- Lack of qualified human cadres in the implementation of the e-municipality.
- 8- Lack of adequate funding to meet the needs of the e-municipality.

9- Lack of a special strategic plan to implement the e-municipality.

10- Most municipalities continue to rely on traditional methods of service delivery, where the applicant visits the municipality and communicates with them through the public service center or moving between the various departments. This is despite having a portal or links to e-services on the pages of a limited number of Palestinian municipalities.

7.3.2 Technical Challenges

The biggest technical challenge was to integrate the e-municipality system with other municipal systems. In addition, there were also other technical challenges, including:

- 1- There is no proper integration of the municipality's internal databases, as multiple names and numbers exist for the same citizen in different services.
- 2- The lack of formal technical support agreements between the municipalities and the software providers of their older systems.
- 3- Municipal databases are not standardized.
- 4- Weak electronic culture of some municipal staff.
- 5- The partial inability to use the Internet and technology in addition to the lack of availability of the Internet to all staff.

6- Lack of a qualified human cadre with sufficient experience in how to design or manage security services.

7.3.3 Legal Challenges

There are major challenges that face the local authority are classified as legal challenges, mainly as related to adopting direct e-payment, and, e-signature. There can be as follows:

1. The absence of detailed regulations and laws to activate the e-transactions law in the field of e-payment and e-signature.
2. The absence of detailed regulations and laws for e-transactions law in general and its application in technical and procedural aspects in particular in the field of e-payment and e-signature.
3. Lack of a secure legislative infrastructure for e-transactions.
4. Insufficiency of regulatory framework in the application and handling of special issues in e-signature.

7.4 The Main Objectives of e-Municipality Initiative

The assessment of the MOLG strategic framework for the transition to e-municipalities (2019-2023) (Ministry of Local Government, 2018a) studies, indicates that there are some objectives that were reached in implementing the e-municipality initiative, but there are some objectives that still need to be developed and supported to achieve the transition to the e-municipality.

Based on the conducted SWOT analysis and the TAM results, the researcher recommends the following strategic objectives of the e-municipality:

1. Achieving an effective, efficient and productive e-municipality.
2. Providing citizens with reliable services, enhancing them and improving the quality of service provided to citizens.
3. Increasing the municipality management and technical staff awareness on the concept of e-municipality and its benefits, and e-services.
4. Focusing on digital literacy in how to use the Internet and electronic devices, which would lead citizens to deal with the e-municipality and its services.
5. Completion of the development of legislation, laws and regulations supporting the transformation into a full e-municipality.

7.5 Critical Success Factor for e-Municipality Initiative

In this section, the critical success factors for the success of the e-municipality in the Palestinian municipalities will be identified and explained. According to the analysis of the reality of the Palestinian municipalities in the implementation of the e-Municipality initiative, it was found that there are some critical factors that have to be taken well to in consideration for the success of the initiative. These factors are summarized as follows:

1. **Internal political desire:** The desire of leaders in the municipalities to adopt and accept the e-municipality has a great impact on the implementation of the e-municipality and achieves its objectives.
2. **Having overall vision and strategy:** The overall vision of the e-municipality initiative and determining "where we want to reach" are key success factors in its implementation. In addition, the vision of information technology, which is a means to help and push the municipalities to the desired transformation.
3. **Acquiring competencies:** Having the necessary skills and knowledge, especially within the municipality itself, greatly facilitates the implementation of the e-municipality.
4. **Having adequate technological infrastructure:** The availability of the required technologies infrastructure within the municipality helps to implement the e-municipality. Unified databases within the municipalities and with other government institutions are also required, which would lead the municipalities to optimize the implementation of the e-municipality.
5. **Sound management practices:** These are essential in transformation towards the e-municipality, and help to adopt the e-municipality. In addition, the proper re-engineered operations, procedures, and sequential processes within the municipality towards implementation the e-municipality, as well as the adequate computerized systems, will ensure adopting the e-municipality.

6. Supporting laws and legislation: An important factor for the success of the e-municipality is the availability of a legal environment in support of electronic operations within municipalities. In addition to the provision of regulations and laws to support the activation of e-payments in full, and provide a secure infrastructure from the legislative point of view for the execution and completion of electronic transactions.

7.6 Lessons Learned from the Implementation of the e-Municipality Initiative

This section reflects on the lessons learned from the challenges and issues facing the implementation and application of e-municipality in the Palestinian municipalities.

The challenges can be turned into lessons to be taken in to consideration for future implementations of e-municipality. The lessons can be summarized in the following:

1) Improved planning. Approved strategic visionary planning involving all stakeholders, and following proper monitoring and evaluation plans, leads to potential success. The e-municipality initiative lacks detailed implementation plans.

2) Oversee the e-municipality at the executive level. Create an initiative national steering group made up of management representatives of MDLF, MOLG, municipalities, companies and consultants. The group should be chaired by head of MDLF and MOLG or their deputies, and should meet

regularly during implementation to monitor and track progress, deal with risks, and budget and resource allocation.

3) Manage the e-municipality professionally on a daily basis.

Hire/assign a professional to be responsible for the e-municipality (can be an external consultant) and to manage the implementation plan, activities and resources of the initiative. The lack of a clear initiative management role has led to a gap in managing changes in the plan, tracking and reporting on progress.

4) Design before building. The final user interface design must be completed and approved by MDLF/municipalities, before development/implementation begins. Design is essential in planning and preparing test plans and final acceptance of the system. Upon completion of the final coordination of the user interface is needed, as well as testing and ensuring proper operation, then the program is operating efficiently and effectively.

5) Procure Electronic Municipality System (EMS) and OSS as one package. To reduce the risk of system integration, EMS and OSS must come from the same supplier. The two systems need to be effectively integrated in one system with the same forms of service provided to citizens and service desk staff.

6) Consolidate and integrate citizens' data across the municipality.

Citizen data analysis and integration should be done prior to EMS implementation, as a separate project or stage, to ensure data quality issues are clarified, scoped and dealt with legally and scientifically. It is the responsibility of the municipality to create and maintain a unified citizens' database/repository that could be used by EMS. Unification of database within the municipality and at all level is needed to revolt one unified database.

7) Improve municipal management awareness of e-municipality

benefits and issues. More time should be spent in raising awareness of the municipality administration and employees of the municipality's e-services and the legal responsibilities of direct interactions between employees through e-services. This could translate into future changes in the administrative and organizational structure of municipalities in the management of e-services. In addition to the preparation of capacity building, encouraging and educating, brochures and booklets will raise the level of awareness of employees and staff in the e-Municipality initiative and e-services.

8) Control donor's efforts. Coordinate and organize donor efforts to transform local bodies into e-municipalities. MOLG and MDLF are working to fine-tune donors' efforts and programs to serve Palestinian municipalities as they move to e-municipalities.

9) Increase the technical capacity of municipal staff and technical infrastructure. Municipalities should be assessed for technical capacity to implement, host and manage EMS, and where necessary, that capacity should be increased. This covers the available IT and service desk human resources as well as the necessary technical infrastructure to host and support the system.

10) Content is backbone. Information is essential for public users of e-services; content is not news about the municipality. End user agreements, service level agreements, IT policies and procedures, privacy policies, legal statements should be prepared, validated and approved before e-municipality systems go live. As e-services are new in Palestine and their legal framework is not yet clear, these documents and agreements will help to clarify the responsibilities, liabilities and expectations of participants in such services.

7.7 Conclusion

In this chapter, SWOT analysis is presented. The key issues and general challenges facing the optimal implementation of the e-municipality are presented as well. In addition, the strategic objectives that seek to achieve in the implementation of the initiative of the e-municipality in the Palestinian municipalities are identified. This chapter provides insight into the critical success factors that help municipalities successfully implement the e-municipality, as well as the lessons learned.

The results of this chapter are very useful for the next chapter, where feasible strategies are outlined by the SWOT matrix.

Chapter Eight

Developing of A strategic Framework for The Implementation of E-Municipality

8.1 Introduction

In the previous chapters, the TAM model was used to examine the acceptance, adoption and readiness of the Palestinian municipalities in the implementation of the e-municipality. In addition, they presented an assessment of the internal and external environment of the Palestinian municipalities. Consequently, the updated strategic objectives for e-municipality were defined. The issues and challenges that hinder the optimal implementation of the e-municipality initiative were identified. Finally, the success factors critical to the implementation of the e-municipality initiative were presented.

This chapter contains strategies that are proposed towards the achievement of the e-municipality, based on the results of the SWOT analysis and TAM model, taking into consideration the strategies followed by MOLG and any previous relevant studies, in order to overcome the challenges facing implementing the e-municipality.

The matching tool approach, through establishing a SWOT matrix, is utilized in this chapter to identify possible strategies combined into four categories; SO strategies (strengths and opportunities), WO strategies (weaknesses and opportunities), ST strategies (strengths and threats), and WT strategies (weaknesses and threats).

8.2 The Assessment of the Followed Strategies

In this section, the strategies pursued will be assessed whether by MOLG, MDLF, or related previous studies.

The Ministry of Local Government (2018a), prepared the E-Municipality Strategic Framework (2019-2023). One of the strategies followed in the field of transforming to the e-municipality, "Integration with the e-government." Integration implies that there are several bodies and institutions that need legislation to regulate their transactions. Consequently, one of the most important aspects of integration is the legal aspect in order to facilitate transactions between all parties. Recently, two laws were passed regarding e-transactions and electronic crimes, where it helps in facilitating e-transactions and speeding up their completion and approval, but there are obstacles due to the need for a number of regulations and executive supporting legislations. In this aspect, it needs new strategies to overcome obstacles in the legal field.

In addition, dealing with the e-government needs to use the government electronic data transporter (x-road), requiring the provision of proper technical infrastructure, whether at the level of local bodies and municipalities or at the level of government institutions and ministries (Ministry of Local Government, 2018a). In this respect, work is currently underway to develop technical infrastructure and provide secure networks, but it needs supportive strategies for continuous improvement.

Another strategy is identified as "Raise the capabilities and awareness of the leadership of local bodies and their workers on the importance and how to transform to e-municipalities." This strategy needs to build the capabilities of municipal leaders, employees and workers in the municipalities to be able to implement and develop the e-municipality (Ministry of Local Government, 2018a). This strategy needs support for its impact on the effective implementation of the e-municipality.

Moreover, the strategy of "Increasing the demand of citizens to use the municipality's electronic services" is considered in the framework, through developing the municipality's methods of providing the service and delivering it to the citizens (Ministry of Local Government, 2018a).

As for the strategies recommended by the MDLF defined in the document titled "Electronic Municipality System", they include the following (Municipal Development and Lending Fund, 2016):

1. Strategy of "Integration between the e-municipality systems and OSS". Many municipalities face challenges in implementing the e-municipality initiative because of the lack of integration of e-municipality systems with OSS systems; therefore this strategy recommends the use of a unified system from the same resource and are one integrated system. This strategy has been applied in major municipalities such as Ramallah and Hebron.
2. Strategy of "Bill data integration" is considered one of the main success factors for the e-municipality, implying the ability to present/ collect

citizens' bills in an easy way, whether for presentation or payment. The integration between the e-municipality systems and bills is a prerequisite for the successful e-municipality implementation. This strategy needs to be achieved.

3. Strategy of "Unifying citizens' data" reflected in a sub-project of the implementation of the e-municipality. The citizens file needs to be unified before the official launching of the e-municipality for each municipality. This strategy needs to provide the supportive strategies for it.

4. Strategy of "Verify the infrastructure of information technology". This implies providing basic infrastructure for information technology in each municipality before implementing the e-municipality system. In this strategy, work is currently underway to develop technical infrastructure and provide secure networks, but it needs supportive strategies for continuous improvement.

5. Strategy of "Extend the range of e-services". The e-municipality must cover all or most of the services provided by the municipality. Also, the services must be documented in the e-services guide that contains service forms and workflow for each service in addition to the schedule for each service. This strategy is being worked out.

6. Strategy of "Integration with an electronic or semi-e-payment method". In light of the challenges facing the e-municipality from not providing laws that support e-payment, this strategy helps in alleviating this challenge by

going to semi-electronic methods in collecting bills and others. This strategy needs to support and develop effective strategies to overcome challenges in this aspect.

As for the strategies recommended by the relevant previous studies, thesis titled “Strategic Analysis and Development of Electronic Government Strategies for the Palestinian Municipalities”, identified strategies that include (Abu Jaber, 2011):

1. Developing a legal framework necessary for ensuring that information and services must be accessible and securely protected, in order for everyone to have confidence in the material being correct, reliable and subject to the requisite confidentiality. This strategy needs to be supported in order to facilitate e-transactions and facilitate the all procedures of the municipality.
2. Exhibiting leadership is a key strategy for success. E-municipality development process could not be effective, nor important or applicable, if e-municipality initiatives are not adopted by the national and municipal leadership, therefore; this strategy needs more support.
3. Encouraging the private sector participation and investment in the activities of municipalities and their projects especially in the Information Technology Sector. This strategy is achieved.
4. The re-structuring process of the municipality is one of the important strategies, where to initiate to restructure their departments to reconsider

the municipalities' constituents, quick response and more effective. This strategy needs to be more supported in order to facilitate the implementation and optimization of the e-municipality.

5. The re-engineering process for municipalities' actions or procedures. This process is a must strategy for e-municipality at the municipal level before automating processes, as it will have an impact on the service delivery time, cost and effort for both the employees and the public. This strategy needs to be supported.

6. Building the needed human, technical and infrastructural, and financial capacities is also considered one of the main strategic solutions to achieve e-municipality at the municipal level. This strategy needs to be supported.

In the summary, there are some of the strategies mentioned above that have been applied and successful in helping implement the e-municipality. However, there are some aspects that need more attention besides the strategies proposed in this study in order to overcome the challenges facing the implementation of the e-municipality initiative. From these aspects that need increased attention, support and continuous development, the legal aspect that needs to developing laws and regulations to enable successfully completing all electronic transactions. Also raising capabilities and awareness among municipality leaders and employees, about the e-municipality and its services, and how to deal with it. This is supported and confirmed by the TAM model results.

8.3 SWOT Matrix

The feasible strategies are identified based on matching among the outcomes of the SWOT strategic analyses, considering as well TAM model results, are presented. Table 8.1, summarizes the proposed strategies to achieve of the e-municipality initiative. Details on these strategies are presented in the next section.

Table 8.1: SWOT Matrix: Strategies to Achieve the Implementation to the e-Municipality.

	<p>Strengths (S)</p> <ol style="list-style-type: none"> 1. The existence of an efficient and effective leadership support represented by a number of municipalities Mayors and the council members, who believe in the need for e-Municipality and exhibit hard work to achieve this goal. 2. Initial steps in many municipalities have been taken to move towards e-services due to the presence of public service centers and computerized systems. 3. The availability of internal financial supports allocated by many Palestinian municipalities and seeking to get such support. 4. The existence of general strategic plans in all the municipalities, including plans to reach the e-municipality. 5. Availability of qualified staff in IT Palestinian municipalities, particularly the major municipalities. 6. The commitment of municipalities in their procedures and operations to transform into an e-municipality through the provision of "e-services guide. 7. Increased use of the Internet, computers and new and modern technologies in municipalities. 	<p>Weaknesses (W)</p> <ol style="list-style-type: none"> 1. Poor awareness and understanding of senior management in local bodies. 2. The absence of leadership support for e-Municipality initiative. 3. There is a sense of resistance by employees. 4. The absence of clarity of procedures required to achieve transactions and services in a number of municipalities. 5. Lack of sufficient technical staff capable of developing e-services. 6. The weakness of the technical capabilities (infrastructure) of some municipalities to support the concept of e-municipality. 7. The existence of many computerized systems that are not interconnected or integrated with each other in most municipalities, especially the financial system. 8. No provision of incentives for municipal staff to encourage the use of e-services in local bodies. 9. The weak link between the municipality's general strategic plan and ICT plan (if any). 10. Lack of executive regulations providing the
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	8. Increase municipal staff and public attention to the importance of ICT.	required legal environment. 11. There is no unified database within each of Palestinian municipalities. 12. Difficulty of co-operation between municipalities and related institutions
<p>Opportunities (O)</p> <p>1. Increased interest at the government level to the transformation to an e-government. In addition, strategic plans are available to transform into e-government with the help of MTIT.</p> <p>2. The MOLG and MDLF have been supporting developing the municipalities' capabilities including in e-municipality, in addition to the presence of donor interest in supporting this area.</p> <p>3. There is a trend of twinning with many international municipalities that contribute significantly to the transfer of knowledge, experience and potential funds.</p> <p>4. The potential for the development of the legal environment due to the governmental interest in e-government, which will also benefit in the regulatory environment for the e-municipality.</p> <p>5. Existence of experience in IT in the privet sector.</p> <p>6. Accelerating technological development, which can contribute to the provision of e-services at a lower cost.</p> <p>7. Modernization and continuous development of the telecommunications and network infrastructure in Palestine at both the municipal and national levels.</p> <p>8. Cumulative experiences in the technology field in Palestine.</p> <p>9. Existence of a guide on "establishing and</p>	<p>SO Strategies</p> <ul style="list-style-type: none"> • Holding agreements between MDLF, MOLG, APLA and donors with the municipalities to provide financial and technical support for the implementation and development of e-Municipality in line with their strategic plan.(S1,S4,S6,O2,O10) • MDLF and MOLG should appoint a competent project manager to manage e-Municipality initiative from launching to final testing and implementation of the system. (S1,O2) • Joining efforts between the municipalities and IT companies to implement the e-municipality benefiting from the experiences of these companies.(S2,S5,O5,O8) • Utilization of the latest technologies and the modernization of the technical infrastructure of the e-municipality, in addition to the unification and linking of the data banks and programs in the municipality.(S3,S7,O4,O6) • Issuing releases to explain the processes workflow of the e-municipality.(S6,O2,O9) • Holding seminars and workshops to achieve digital society (citizens and employees).(S7,S8,O6,O7). 	<p>WO Strategies</p> <ul style="list-style-type: none"> • Raising the awareness to clarify the benefits of the e-municipality to the employees, through support and incentives in coordination with the MOLG and MDLF. (W1,W2,O2) • Configuring the necessary technical and informatics infrastructure needed in the transformation towards e-municipalities in line with the requirements of integration with e-government. (W7,O1,O5,O8) • Developing action plans for the municipalities related to the use of ICTs. (W9, O1,O4,O6,O8) • Transfer of experiences of the municipalities (including in donor countries) and best practices in the transformation towards the e-municipalities to Palestinian municipalities. (W12,O3) • Consolidating basic databases among Palestinian municipalities as a whole, as well as separate database within each municipality. (W7,W11,O2) • Restructuring the workflow and process in the municipality. (W4,W11,O2,O4,O9) • Training staff on the use of e-municipality and e-services, and staff capacity building and providing incentives for accomplishment. (W3,W5,W8,O2,O5)

operating public service centers" in Palestinian municipalities. 10. The existence of an institutional umbrella for the Palestinian municipalities "APLA", and its role in developing the capabilities of the municipalities for transformation into an e-municipality.		
<p>Threats (T)</p> <p>1. Weak access to e-services due to the difficulty of using them or lack of confidence in them.</p> <p>2. Political instability may adversely affect the provision of external support.</p> <p>3. Lack of public awareness of the importance, role and benefits of e-municipality, which in turn creates resistance the public towards changes.</p> <p>4. Lack of legal legislation supporting the policies and procedures of electronic transformation in the Palestinian municipalities.</p> <p>5. Lack of an approved system, mechanisms, and financial sources (government financial support) for government transfers to support and implement the strategies of Palestinian local authorities for e-transformation.</p> <p>6. Difference, diversity of experience, and unequal capacity among the Palestinian local authorities.</p>	<p>ST Strategies</p> <ul style="list-style-type: none"> • Holding informative and explanatory seminars and workshops that explain the work and requirements of the e-municipality and the in which manner of e-services providing are provided.(S6,T1) • Training municipal employees to update, develop and follow up the e-municipality programs and systems.(S5,T1,T3) • Training the municipal staff about the e-municipality, giving them sufficient information, and empowering them to use the e-municipality and its services.(S1,S7,S8,T3) • Designing and implementation e-municipality development programs that are in line with national strategies to be supported by donors .(S1,T2,T5) 	<p>WT Strategies</p> <ul style="list-style-type: none"> • Developing regulations that allow all e-transactions and helps municipalities' electronic transformation. (W10,T4) • Developing municipal leadership to be able to overcome the challenges facing the municipality. (W1,W2,T1,T3) • Recruitment of external experts to empower the municipal technical staff and to follow up and develop e-municipality systems. (W5,T1,T6)

8.4 Proposed Strategies to Overcome the Challenges Facing the Implementation of the e-Municipality

Based on the above SWOT Matrix, a set of feasible strategies are concluded. These strategies are clustered with conducting more elaborations to achieve the intended strategic objectives related to

e-Municipality initiative. Such elaboration is clarified in the rest of this chapter.

Strategic Objective 1: Achieving an Effective, Efficient and Productive e-Municipality

This objective can be satisfied through the following:

1. Restructuring the workflow and processes in the municipality (W4, W11, O2, O4,O9). This will be done by making decisive decisions on how to deploy or restructure human resources. This strategy plays an important role in increasing the productivity, efficiency and commitment of employees who will serve customers (citizens and businesses). The restructuring process contributes to the clarity of the municipality's objectives, and facilitates and improves the internal work of the municipality and its external relations and communication with other municipalities and with other institutions.
2. Holding agreements between MDLF, MOLG, APLA and donors with the municipalities to provide financial and technical support for the implementation and development of e-municipality in line with their strategic plan (S1, S4, S6, O2,O10). This will be done by making decisive decisions in developing and implementing projects, and programs that help in the process of electronic transformation. This strategy plays an important role in increasing the productivity, efficiency and commitment of municipalities and employees, who will serve customers (citizens and

businesses). This strategy contributes to providing the financial support to assist the municipalities towards electronic transformation.

3. Issuing releases to explain the workflow processes of the e-municipality (S6,O2,O9). This strategy contributes to clarify the workflow process of the e-municipality towards, and includes providing user manuals and customer guides in order to achieve easy access to services, which must be available at municipal websites and portals with all illustrations necessary for use.

4. Appointing a competent project manager to manage e-municipality from launching to final testing and implementation of the system (S1, O2). This strategy contributes to the allocation of a specialist who manages the separate projects that emerge from the implementation of the e-municipality initiative. This strategy increases the efficiency of e-municipality implementation in the Palestinian municipalities.

5. Training municipal employees to update develop and follow up the e-municipality programs and systems (S5, T1, T3). This strategy plays an important role in increasing the effectiveness of employees. This will also contribute to the development of a cadre capable of solving the problems faced in the e-municipality implementation and the e-services provision to citizens.

6. Configuring the necessary technical and informatics infrastructure needed in the transformation towards e-municipalities in line with the

requirements of integration with e-government (W7, O1, O5,O8). This strategy seeks to support development in the field of ICT infrastructure in the municipalities, including maintaining and updating the existing networks, preparing the necessary specifications for the needed hardware and software and relevant technical, and providing the municipality with the necessary technical infrastructure.

7. Developing action plans for the municipalities related to the use of ICT. (W9, O1, O4, O6,O8). This strategy seeks to prepare an ICT action plans in the Palestinian municipalities, to help in creating the necessary technical infrastructure for the transformation into an e-municipality. It also seeks to provide and develop information technology teams in the municipalities.

8. Consolidating as separate database within each municipality (W7, W11, O2). This strategy helps to resolve the issue that a person has several files for the different services, due to the lack of consolidation of a unified database in the municipality.

9. Enhancing municipal leadership to be able to overcome the challenges facing the municipality (W1, W2, T1, T3). This will be achieved through increasing the awareness of mayors and senior management by clarifying the importance and benefits of e-municipality implementation in municipalities.

10. Recruitment of external experts to empower the municipal technical staff and to follow up and develop e-municipality systems (W5, T1,T6).

This strategy helps municipal employees to develop and build their technical capabilities, and in developing, following up and updating on the e-municipality systems.

11. Designing and implementation e-municipality development programs that are in line with national strategies to be supported by donors (S1, T2,T5). This strategy helps donors to know which aspects to support and pay attention to. Also, this strategy assists the municipalities in providing financial support for them, which assists the municipalities in transforming to the e-municipality.

Strategic Objective 2: Providing Citizens with Reliable Services, Enhancing them and Improving the Quality of Service Provided to Citizens

This objective can be realized through the following:

1. Holding agreements between MDLF, MOLG, APLA and donors with the municipalities to provide financial and technical support for the implementation and development of e-Municipality in line with their strategic plan (S1, S4, S6, O2, O10). This strategy helps municipalities to have the technical, human, and infrastructure resources needed to implement the e-municipality.

2. Joining efforts between the municipalities and IT companies to implement the e-municipality benefiting from the experiences of these companies (S2, S5, O5,O8). This strategy helps to transfer expertise and

the successful experiences of the e-municipality to help in implementation. This will also improve the quality of service provided and follow the best methods of service delivery.

3. Issuing releases to explain the workflow processes of the e-municipality (S6, O2,O9). This strategy is helps in providing reliable services to the citizens. It helps to continuously improve the public services provided, and prioritize the services that the municipality will initially provide online.

4. Holding informative and explanatory seminars and workshops that explain the work and requirements of the e-municipality and the in which manner of e-services providing are provided (S6, T1). This will facilitate the interaction between those responsible for the e-municipality, and between municipalities and their employees, and in clarifying the requirements for the transformation to the e-municipality, and the provision of the municipality's e-services.

5. Transferring of experiences of the municipalities (including in donor countries) and best practices in the transformation towards the e-municipalities to Palestinian municipalities (W12, O3). This strategy seeks to transfer best practices in implementing and transforming to the e-municipality to the Palestinian municipalities, in order to help the municipalities in choosing the best procedure to implement the e-municipality.

6. Training staff on the use of e-municipality and e-services, and staff capacity building and providing incentives for accomplishment (W3, W5, W8, O2, O5). This strategy seeks to raising the capabilities of municipality's employees and training them on the municipality's electronic systems and services, while providing proper staff incentives.

Strategic Objective 3: Increase the municipality management and technical staff awareness on the concept of e-municipality and its benefits, and e-services.

This objective will be achieved through the following:

1. Holding informative and explanatory seminars and workshops that explain the work and requirements of the e-municipality and the manner which e-services are provided (S6, T1). Through this strategy, awareness is raised on the e-municipality, its benefits, and on how to provide e-services.
2. Training staff on the use of e-municipality and e-services, and staff capacity building and providing incentives for accomplishment (S1, S7, S8, T3). The training to raise awareness among staff on e-municipality help to improve awareness about e-municipality initiative, and encourage staff to use the e-municipality and head to the e-services and the e-portal instead of the traditional services. This leads to increase the staff confidence e-services in and become more satisfied with them.
3. Raising the awareness to clarify the benefits of the e-municipality to the employees, through support and incentives in coordination with the MOLG

and MDLF (W1, W2, and O2). This strategy seeks to raise awareness on the e-municipality and its benefits in agreement with MOLG and MDLF, provide incentives based on achievements, and follow procedures, in the implementation of the e-municipality.

Strategic Objective 4: Focusing on Digital Literacy in How to Use the Internet and Electronic Devices, which would Lead Staff to Deal with the e-Municipality and its Services.

This objective will be achieved through the following:

1. Utilization of the latest technologies and the modernization of the technical infrastructure of the e-municipality, in addition to the unification and linking of the data bases and programs in the municipality (S3, S7, O4, O6). This strategy seeks to provide the latest technologies in the municipalities, and to constantly update and improve the ICT infrastructure.
2. Holding seminars and workshops to achieve digital society (citizens and employees) (S7, S8, O6, O7). This will enhance the knowledge and use of ICT tools among municipal staff, through hiring qualified employees with relevant skills to work within the municipality, outsourcing expertise and staff to support the work of the municipality, and encouraging skilled and professional municipal human resources them in developing ICT expertise internally. As for the citizens enhancing the knowledge and use of ICT, will be done through increasing public awareness on ICTs through

organizing training programs (such as Digital Camp), organizing seminars, and focusing on the youth in reducing digital illiteracy and training them on how to receive e-services.

Strategic Objective 5: Complete the Development of Legislation, Laws and Regulations Supporting the Transformation into a Full e-Municipality.

This objective can be satisfied through developing regulations that allows all e-transactions and helps municipalities' electronic transformation (W10, T4). This involves the legal framework that includes the laws and regulations such as the e-signature law, the electronic transactions law, the personal data protection law, the Internet laws and information technology, and the Cybercrime Law.

This strategy involves developing and implementing the laws, regulations and instructions necessary for ensuring that information and services must be accessible and securely protected.

The developed laws and regulations need to be disseminating to the public, which can citizens' confidence in using the e-municipality.

8.5 Conclusion

The development of the strategic framework to assess the implementation of the e-municipality is an important step towards the optimal implementation of the e-municipality.

The developed strategic framework is derived from the prepared SWOT Matrix based on SWOT analysis process and TAM model results.

Chapter Nine

Conclusions and Recommendations

9.1 Summary

This thesis has addressed the assessments of the e-municipality; the readiness, acceptance and adoption in the Palestinian municipalities. In addition, it has developed strategies to overcome the challenges facing the implementation of the e-municipality.

Several case studies concerned with the e-municipality have been reviewed. Common requirements for e-municipality have been identified from practical point of view. These were clustered into administrative, technical, and financial requirements.

A conceptual TAM model was also proposed to assess the readiness, acceptance and adoption of the e-municipality initiative in the Palestinian municipalities. Constructs more identified based on the situation of Palestinian municipalities. They include: perceived usefulness, perceived ease of use, level of technology use and availability, administrative and management support, level of e-services, availability of laws and legislations and attitude towards on the e-municipality.

Status quo analysis of the current conditions related to e-municipality in Palestine was presented. SWOT analysis was performed, based on the documents provided by the MDLF, MOLG, and specific Palestinian municipalities, as well as interviews with experts from MOLG, MDLF and

GIZ, which led to the identification and the proposal of strategies for the optimal application of the e-municipality.

9.2 Conclusions

✓ E-municipality is considered as one of the most important subjects concerned with the local government to study and perform research on. The assessment of the developing and implementing e-municipality strategic solutions faces a number of constraints as summarized hereafter. Firstly, the legal framework needed to work and deliver services in a trusted and secure environment. In addition, the financial constraints are considered as a major challenge to provide the requirements for the e-municipality. Other relevant constraints include the technical and technological constraints, human resources constraints, and organizational constraints related to the organizational structure, system, and awareness.

✓ During the course of this research, several challenges had been faced, which can be summarized as follows:

- Shortage of available information and data on the research topics, and the difficulty to access the available ones.
- Misunderstanding of e-municipality between the municipalities and staff, and lack of the awareness for the importance of application of the e-municipality.

- Limited awareness by the municipalities administrative the importance of the assessment of the implementation and development of the strategic plans adopted concerning the e-municipality in the Palestinian municipalities.

✓ The process of assessment of the readiness, acceptance and adoption of the e-municipality in the Palestinian municipalities is an important step to ensure the optimal implementation of the e-municipality initiative. This process is based on identifying the factors and prerequisites for the successful implementation of the e-municipality initiative. The collected relevant data and information were analyzed through the TAM model to assess the factors influencing the acceptance and adoption of the e-municipality in Palestine.

✓ Strategic Analysis is considered as the foundation for building effective strategies for development and implementation of e-municipality at the Palestinian municipalities. These gathered data and information were analyzed through the SWOT analysis to understand the external and internal relevant factors -the strengths, weaknesses, opportunities and threats- on e-municipality.

✓ The developed strategies were identified from the preparation of the SWOT Matrix derived from SWOT analysis. The most prominent strategies include:

- Developing regulations that allows all e-transactions and helps municipalities' electronic transformation to ensure that information and services must be accessible and securely protected, in order to build confidence on the correcting, reliability, and confidentiality.
- Exhibiting leadership is a key strategy for success. Enhancing e-municipality could not be effective, nor important or applicable, if e-municipality initiative is not adopted by the municipal leadership.
- Investing efforts to that explain the process and requirements of the e-municipality and the manner which e-services are provided, to clarify the e-municipality initiative and its benefits, as well as raise awareness about the implementation of e-municipality.
- Building the needed human resources, technical and infrastructural, and financial capacities is also considered one of the main strategies to achieve e-municipality.
- Restructuring the workflow and processes in the municipalities is an important strategy, as the e-municipality satisfies the municipality's ambition of the electronic presence, that require organizational restructuring procedural re-engineering, and to respond quickly and more effectively.

- Joining efforts between the municipalities and IT companies to implement the e-municipality benefiting from the experiences of these companies, that help in the transfer of expertise and benefit in the implementation and application of the e-municipality.
- Reduction of digital illiteracy, whether at the level of employees in the municipalities, or citizens. This strategy will help raise awareness of the importance of ICT and increase the orientation to digital tools and applications that will enhance the e-municipality initiative.
- ✓ This study has filled a concerning the assessment of the application of the e-municipality, in order to set strategies overcome the challenges that hinder the implementation of e-municipality. No previous research has been done to assess of readiness and adoption of e-municipality in the Palestinian municipalities.
- ✓ The outcome of the research would allow for the gradual development of the e-municipality, and reduce the risk of failure resulting from change resistance and lack of cooperation, and to enhance the potential for the success of e-municipality in the Palestinian municipalities.

9.3 Recommendations

After analyzing the Palestinian municipalities' current status, concerning the e-municipality, assessment of the readiness, acceptance and adoption of the Palestinian municipalities to implement e-municipality, and concluding a set of proposed strategies for the optimal application to e-municipality, the following recommendations are suggested to be considered:

- ✓ It is recommended to consider the identified strategies and actions to implement the e-municipality in the Palestinian municipalities.
- ✓ It is highly recommended to improve the awareness of e-municipality benefits and the importance among, the municipal management and employees, the governmental agencies, as well as the citizens, as this is necessary for pushing e-municipality to be developed, implemented, then to succeed.
- ✓ It is recommended to formulate strategic plans for the municipalities' development, benefiting for the outcome the strategy, that consider the ICT as an integral part of the development process.
- ✓ In order to facilitate the development and implementation of e-municipality, it is recommended to put more pressure on the national level to get the needed support; whether financial, technical or human, to develop and implement e-municipality initiative.

- ✓ It is recommended to speed up the ratification on the proposed laws related to the e-services delivery.
- ✓ It is highly recommended to expedite the completion of needed prerequisites and requirements; whether technical, human resources, or financial for the e-municipality initiative.
- ✓ It is recommended to hold new or activate current agreements with other countries or municipalities to benefit from their experiences in e-government and e-municipality domain.
- ✓ It is recommended that a good communication plan and a change management strategy be developed to address the expected resistance of the public and municipal staff, address the fear of change and technology, and ensure that staffs are able to fully utilize the new e-system.
- ✓ It is recommended to re-engineer the processes of municipal services delivery to the public as well as organizational structures before putting them online.
- ✓ There are currently semi-electronic payment methods that enable the municipalities to collect any of their revenues and the citizens to pay their bills electronically such as their Madfoaaty Company and Palpay. Therefore, it is recommended to MOLG and MDLF that includes the form a national framework municipalities, the Palestinian Monetary Authority (PMA), the MOLG, the MDLF, MTIT, APLA, interested local banks, Palpay and related IT companies to promote e-payment methods and

technical policies and processes to include these facilities in future implementation processes.

9.4 Limitations

Finally, there are limitations that need to be considered. First, the finding may not be applicable to all the municipalities, as they might have different e-municipality readiness. Second, this research did not examine factors that influence citizens' adoption. Therefore, future studies would be significant to investigate factors that determine the adoption of e-municipality services by the citizens. In addition, this research did not discuss linking the e-municipality with the Zinnar project, and how this project can help Palestinian municipalities in the transition and progress towards an e-municipality. Finally, it has not studied the percentage and extent of implementation and application of strategies for converting to an e-municipality.

References

- Williams, A. (2003). **How to Write and Analyse a Questionnaire.** *Journal of Orthodontics*, 30, 245–252.

- Abbassy, M. M., & Mesbah, S. (2016). *Effective e-Government and Citizens Adoption in Egypt.* *International Journal of Computer Applications*, 133(7). <https://doi.org/10.5120/ijca2016907886>

- Abdelkader, A. (2015). *A Manifest of Barriers to Successful E-Government: Cases from the Egyptian Programme.* *International Journal of Business and Social Science*, 6, 169–186.

- Abdulkareem, A. K., Oyedele, S., & Ishola, A. A. (2017). *Local Government Administration and National Development in Nigeria: Challenges and Prospects.* *Ilorin Journal of Human Resource Management (IJHRM).*

- Abu, F., Yunus, A. R., Majid, I. A., Jabar, J., Aris, A., Sakidin, H., & Ahmad, A. (2013). **Technology Acceptance Model (TAM) : Empowering Smart Customer To Participate In Electricity Supply System.**

- Abu Jaber, N. O. (2011). **Strategic Analysis and Development of Electronic Government Strategies for the Palestinian Municipalities.** M.S.c Thesis An-Najah National University.

- Ahveninen, T. (2016). **Digital Transformation of Municipal Services in Finland**. Turun Yliopisto University of Turku.
- Akhtar, I. (2016). **Research Design**. Research in Social Science: Interdisciplinary Perspectives, 4(11), 68–84.
- Akman, E., Akman, Ç., Turhan, D. G., & Okçu, M. (2013). *City Information Systems as E-Manucipality Application in Local Administrations; An Evaluation Over Konya and Kayseri Big Cities Examples*. **Mediterranean Journal of Social Sciences**, 4(11), 758–762.
<https://doi.org/10.5901/mjss.2013.v4n11p758>
- Al-adaileh, R. M. (2009). *An Evaluation of Information Systems Success: A User Perspective-the Case of Jordan Telecom Group*. **European Journal of Scientific Research**, 37(2), 226–239.
- Al-Sobhi, F., & Weerakkody, V. (2010). **The Role of Intermediaries in Facilitating e-Government Diffusion in Saudi Arabia**. European and Mediterranean Conference on Information Systems.
<https://doi.org/10.1016/j.jinteco.2010.12.003>
- Al Nagi, E., & Hamdan, M. (2009). **Computerization and e-Government implementation in Jordan: Challenges, obstacles and successes**. **Government Information Quarterly**, 26, 577–583.
<https://doi.org/10.1016/j.giq.2009.04.003>

- Alateyah, S. A., Crowder, R. M., & Wills, G. B. (2013). ***An Exploratory study of proposed factors to Adopt e-government Services. International Journal of Advanced Computer Science and Applications.*** <https://doi.org/10.14569/ijacsa.2013.041108>
- Alketbi, H. (2018). **An Evaluation of E-government Effectiveness in Dubai Smart Government Departments.** Southampton Solent University. <https://doi.org/10.1016/j.aquaeng.2005.05.002>
- Alsheha, B. A. (2007). **The e-government program of Saudi Arabia Advantages and challenges.**
- Apuke, O. D. (2017). ***Quantitative Research Methods : A Synopsis Approach.*** *Arabian Journal of Business and Management Review (Kuwait Chapter).* <https://doi.org/10.12816/0040336>
- Ayman, D. M., & Azim, R. A. –. (2016). **Adopting E-government as a strategic tool for economic development: Insights from Governmental websites in Egypt.**
- Bagozzi, R. (2017). **Measurement and Meaning in Information Systems and Organizational Research: Methodological and Philosophical Foundations.** *MIS Quarterly*, 35(2), 261. <https://doi.org/10.2307/23044044>

- Basamh, S. S., & Qudaih, H. A. (2014). *E-Government Implementation in the Kingdom of Saudi Arabia: An Exploratory Study on Current Practices, Obstacles & Challenges*. **International Journal of Humanities and Social Science**, 4(2), 296–300. <https://doi.org/10.1093/chemse/bjw097>
- Bethlehem Municipality. (2014). **The strategic development plan for the city of Bethlehem (2014-2017)**.
- Bojang, M., & Bwando, W. (2018). **E-municipality Applications in Local Government: Prospects and Challenges**, (September).
- Center for e-Government Studies. (2014). **Singapore Electronic Government**. Retrieved from <http://www.egovconcepts.com>
- Chen, Y N.Chen, H M. Huang, W., & Ching, R. K. H. (2006). **E-Government Strategies in Developed and Developing Countries : An Implementation Framework and Case Study**, 14(1), 23–46.
- Collins, M., & Farm, O. A. (2018). Case study: **The world's first data embassy – Estonia. Embracing Innovation in Government: Global Trends**. <https://doi.org/10.1080/10720169608400119>
- Cook, C. (1979). **Quantitative Research : Reliability and Validity**. Student Affairs Assessment.

- Darwazeh, S., Khrisat, D., & Al Dajah, S. (2016). **Effect of Application of E-Government on the Staff Performance in the Greater Amman Municipality A Field Study**. *Research in Business and Management*, 3(2), 1–23. <https://doi.org/10.5296/rbm.v3i2.9640>
- David, F. R., Ali, A. J., & Al-Aali, A. Y. (2011). **Strategic Management: Concepts and Cases**. (R. Roussan, Ed.) (1st Arab W).
- Davis, F. D. (1989). **Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology**. *Management Information System Quarterly*, 13(3), 1319–1340. <https://doi.org/10.1016/j.cell.2017.08.036>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). **User Acceptance of Computer Technology: A Comparison of Two Theoretical Models**. *Management Science*, 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>
- Doyle, L., Brady, A. M., & Byrne, G. (2012). *An overview of mixed methods research*. **Journal of Research in Nursing**, 14(2175–185). <https://doi.org/10.1177/17449871116674257>
- Dubai Municipality. (2016a). **Corporate Governance Report**.

- Dubai Municipality. (2016b). **Dubai Municipality Strategic Plan (2016-2021)**. Retrieved from [https://www.dm.gov.ae/ar/AboutDM/Documents/Strategic Plan Of DM/Arb_DM+Strategic+Plan+2016-2021.pdf](https://www.dm.gov.ae/ar/AboutDM/Documents/Strategic%20Plan%20Of%20DM/Arb_DM+Strategic+Plan+2016-2021.pdf)
- E-estonia. (2015). **E-governance**. Retrieved from <https://e-estonia.com/solutions/e-governance/>
- E-Governance Academy. (2018). Local e-Government. Retrieved November 29, 2018, from <https://ega.ee/local-e-goverment/>
- Etikan, I., & Bala, K. (2017). *Sampling and Sampling Methods*. **Biometrics & Biostatistics International Journal**, 5(6). <https://doi.org/10.15406/bbij.2017.05.00149>
- European Commission. (2016). **e-Government in Estonia**,. Retrieved from [https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernm ent in Estonia - February 2016 - 18_00_v4_00.pdf](https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment%20in%20Estonia%20-%20February%202016%20-%2018_00_v4_00.pdf)
- Franke, R., & Eckhardt, A. (2014). **Crucial Factors for E Government Implementation Success and Failure: Case Study Evidence from Saudi Arabia**. Proceedings of the 20th Americas Conference on Information Systems (AMCIS). Retrieved from <http://aisel.aisnet.org/amcis2014/eGovernment/GeneralPresentations/1>

- Gebba, T. R., & Zakaria, M. R. (2015). *E-Government in Egypt: An Analysis of Practices and Challenges*. **International Journal of Business Research and Development**, 4(2), 11–25.
<https://doi.org/10.24102/ijbrd.v4i2.576>
- Gingrich, P. (2004). **Introductory Statistics for the Social Sciences**. Retrieved from <http://uregina.ca/~gingrich/text.htm>
- Greater Amman Municipality. (2018). **Greater Amman Municipality**. Retrieved from <https://www.ammancity.gov.jo/ar/gam/about.aspx>
- Hair, J., Hult, T., Ringle, C., & Sarstedt, M. (2014). **A Primer on Partial Least Squares Srtructural Equation Modeling (PLS-SEM)**. (V. Knight, Ed.) (1st ed.). Los Angeles.
- Hanna, N. K., & Knight, P. T. (2012). **National Strategies to Harness Information Technology: Seeking Transformation in Singapore, Finland, the Philippines, and South Africa**. <https://doi.org/10.1007/978-1-4614-2086-6>
- Hassan, N. T., & Meliji, M. (2017). *Use the Technology Acceptance Model to Analyze the Attitudes and Intentions of Saudi University Students Towards Using e-Learning For their Courses*. **Arab Journal for Quality Assurance of e - Learning**, 10(30), 33–62.
- Hayajneh, A. F. (2012). **Management of e-government projects Arab and international experiences**.

- Hebron Municipality. (2019). **Hebron Municipality**. Retrieved from http://www.hebron-city.ps/ar_page.aspx?id=RdX744a6662271aRdX744
- HOPE, & NCD. (2018). **The Local Development Plan for the City of Hebron (2018-2021)**.
- Huang, W., Siau, K., & Kee Wei, K. (2005). **Electronic Government Strategies and Implementation (1'st Editi)**. Idea Group Inc (IGI). Retrieved from https://books.google.ps/books?hl=ar&lr=&id=d84laQpqb1QC&oi=fnd&pg=PP1&dq=The+Electronic+Government+from+Strategy+to+Implementation&ots=hJgmvYRcl1&sig=Ak8OMutY55bY-_kzoRxDVnBnOjo&redir_esc=y#v=onepage&q=The Electronic Government from Strategy to Implementation&f=false
- Improvement and Development Agency (IDeA), & Society of Information Technology Management (Socitm). (2002). Local e-government now : a worldwide view.
- Info-comm. **Development Authority of Singapore**. (2010). Singapore e-Government Journey.
- Jain, V., & Kesar, S. (2007). **E-Government Implementation Challenges in UK: A Case Study of Trading Standards Department**. Americas Conference on Information Systems (AMCIS). Retrieved from <http://aisel.aisnet.org/amcis2007http://aisel.aisnet.org/amcis2007/135>

- Juurikas, K. (2015). **Usage of Estonian public e-Services amongst young people.** Retrieved from [https://publications.theseus.fi/bitstream/handle/10024/98236/Usage of Estonian public e-Services amongst young.pdf?sequence=1](https://publications.theseus.fi/bitstream/handle/10024/98236/Usage_of_Estonian_public_e-Services_amongst_young.pdf?sequence=1)
- Kalvet, T. (2012). *Innovation: a factor explaining e-government success in Estonia.* **Electronic Government, an International Journal**, 9(2), 142–157. <https://doi.org/10.1504/eg.2012.046266>
- Ke, W., & Wei, K. K. (2004). **Successful e-Government in Singapore.** *Communications of the ACM*, 47(6), 95–99. <https://doi.org/10.1145/990680.990687>
- Khan, H. U., Alsahli, A., & Al-sabri, H. (2013). *E-Government in Saudi Arabia Analysis on present and future.* **Journal of Electronics and Communication Engineering Research**, 1(3), 01–13.
- Kitsing, M. (2011). **Success Without Strategy: E-Government Development in Estonia.** *Policy & Internet*, 3(1).
- Kitsing, M. (2014). **An Evaluation of E-Government in Estonia.** National Center for Digital Government.
- Klischewski, R. (2015). **From e-government strategy to services: Challenges of Inter-organizational IT Governance in Egypt.** <https://doi.org/10.1145/2691195.2691257>

- Köylüoğlu, S., İnce, H., Koyuncuoğlu, Ö., & Zerenler, M. (2013). ***THE RELATIONSHIP BETWEEN E-MUNICIPALITY, INFORMATION SYSTEMS AND QUALITY OF SERVICE AND THEIR REFLECTIONS IN TURKEY.*** *International Journal of EBusiness and EGovernment Studies*, 5(1), 01–11.
- Lal, P. (2012). **E-government Service Adoption in India: A conceptual model.** *International Management Institute*, VII(1), 181–184.
- Layne, K., & Lee, J. (2001). **Developing fully functional E-government: A four stage model.** *Government Information Quarterly*, 18, 122–136. <https://doi.org/10.1016/j.comnet.2009.08.011>
- Lee, Y., Kozar, K. A., & Larsen, K. R. T. (2003). **The Technology Acceptance Model: Past, Present, and Future.** *Communications of the Association for Information Systems*, 12(1), 752–780. <https://doi.org/10.17705/1cais.01250>
- Mahizhnan, A., & Andiappan, N. (2002). **e-Government: The Singapore.**
- Mathers, N., Nick Fox, & Hunn, A. (2005). ***Trent Focus for Research and Development in Primary Health Care: Using Interviews in a Research Project.*** *Journal of Scientific Instrument.*

- Mayasari, I., Hendrowati, R., Sofia, A. I., & Wiadi, I. (2018). **Implementation of E-Government Through Implementation of Technology Acceptance Model**. Jurnal Aplikasi Manajemen, 15(4), 659–669. <https://doi.org/10.21776/ub.jam2017.015.04.13>
- **Ministry of Economic Affairs and Communications**. (2014). Digital Agenda 2020 for Estonia.
- Ministry of Local Government. (2018a). **E-Municipality Strategic Framework (2019-2023)**.
- Ministry of Local Government. (2018b). **Strategic Framework for E-Municipalities**.
- Ministry of Telecom and Information Technology. (2016). **Sectoral Strategic Plan for Telecommunication, Information Technology and Post**. Retrieved from [http://www.mtit.pna.ps/Strategic Plan 2017-2022.pdf](http://www.mtit.pna.ps/Strategic%20Plan%202017-2022.pdf)
- Mofleh, S. I., & Wanous, M. (2008). **Understanding Factors Influencing Citizens Adoption of e-Government Services in the Developing World: Jordan as a Case Study**. Infocomp. Retrieved from <http://infocomp.dcc.ufla.br/index.php/INFOCOMP/article/view/211>
- Mohajan, H. K. (2017). **Two Criteria for Good Measurements in Research: Validity and Reliability**. Annals of Spiru Haret University. Economic Series, 17(3), 58–82. <https://doi.org/10.26458/1746>

- Mowaffak, A. Q. (2015). *“E-Municipality” As a Mechanism to Enhance Administrative and Financial Transparency in The Algerian Municipalities*. **Journal of Human Sciences**, 40, 175–190.
- Mujali Al-rawahna, A. S., Chen, S.-C., & Hung, C.-W. (2018). *The Barriers of E-Government Success : An Empirical Study from Jordan*. **International Journal of Managing Public Sector Information and Communication Technologies**, 9(2), 01–18.
<https://doi.org/10.5121/ijmpict.2018.9201>
- **Municipal Development and Leading Fund**. (2016). Electronic Municipality System (EMS).
- Nablus Municipality. (2016). **Nablus Municipality**. Retrieved from <http://nablus.org/index.php/ar/about-municipality-ar/vision-ar>
- Nasuti, F. W. (2016). **Qualitative and quantitative research**. LUMS Effective Learning.
- Ndreu, A. (2016). *The Definition and Importance of Local Governance*. **Social and Natural Sciences Journal**, 10(1), 5–8.
<https://doi.org/10.12955/snsj.v10i1.730>
- Nickols, F. (2011). **Strategy, Strategic Management, Strategic Planning and Strategic Thinking**. Research Gate.

- Ommani, A. R. (2011). Strengths, Weaknesses, *Opportunities and Threats (SWOT) Analysis for Farming System Businesses Management: Case of Wheat Farmers of Shadervan District , Shoushtar Township, Iran*. *African Journal of Business Management*, 5(22), 9448–9454. <https://doi.org/10.1111/j.1600-051X.2008.01247.x>
- Omwansa, T., Mwololo, T., & Lules, I. (2012). *Application of Technology Acceptance Model (TAM) in M-Banking Adoption in Kenya*. *International Journal of Computing and ICT Research*, 6(1), 31–43.
- **Organisation for Economic Co-operation and Development (OECD)**. (2003). *E-Government in Finland: An Assessment*. Policy Brief.
- Osifo, O. C. (2018). **Examining digital government and public service provision: The case of Finland**. University of Vaasa/School of Management, 1545–1550. <https://doi.org/10.23919/MIPRO.2018.8400242>
- Paris, M. (2005). **Local E-Government and Devolution: Electronic Service Delivery in Northern Ireland**. *Local Government Studies*, 31(3), 307–319. <https://doi.org/10.1080/03003930500453450>
- Perakyla, A. (2002). **Reliability and Validity in Research Based on Tapes and Transcripts**. *Qualitative Research: Theory, Method and Practice*.

- Philip, L. J. (1998). **Combining Quantitative and Qualitative Approaches to Social Research in Human Geography - An Impossible Mixture?** *Environment and Planning A*, 30, 261–276. <https://doi.org/10.1068/a300261>
- Ramallah Municipality. (2012). **Ramallah Municipality**. Retrieved June 27, 2019, from http://www.ramallah.ps/ar_page.aspx?id=%27e2hJBua1287721809ae2hJBu%27
- Rammal, I., & Hamad, S. A. (2008). **Planning Capacities within the Palestinian Municipalities. In The First International Conference on Urban Planning in Palestine: Current Challenges & Future Prospects** (pp. 191–216).
- Samara, K., & Raven, J. (2015). **A Readiness for Change Model for Dubai E-Government Initiative**. <https://doi.org/10.4018/978-1-4666-8430-0.ch009>
- Sammut-Bonnici, T., & Galea, D. (2015). **SWOT Analysis**. *Research Gate*, 115–140. <https://doi.org/10.1002/9780470587102.ch5>
- Scherer, R., Siddiq, F., & Tondeur, J. (2019). **The Technology Acceptance Model (TAM): A Meta-Analytic Structural Equation Modeling Approach to Explaining Teachers' Adoption of Digital Technology in Education**. *Computers and Education*, 128, 13–35. <https://doi.org/10.1016/j.compedu.2018.09.009>

- Sebetci, Ö. (2015). *A TAM-Based Model for E-Government: a Case for Turkey*. **International Journal of Electronic Governance**, 7(2), 113–135. <https://doi.org/10.1504/ijeg.2015.069503>
- Sethi, N., & Sethi, V. (2008). **E-government Implementation: A Case Study of Dubai e-Government**. Nanyang Technological University, 185–195.
- Slman, A. (2010). **Alwasat news**. Retrieved from <http://www.alwasatnews.com>
- Sure. (2018). **Sure Global Tech: Success Stories**. Retrieved November 29, 2018, from <https://www.sure.com.sa/ar/MediaCenter/CaseStudies/Pages/story001.aspx>
- Surendran, P. (2012). *Technology Acceptance Model: A Survey of Literature*. **International Journal of Business and Social Research**, 2(4), 463–468. <https://doi.org/10.1016/j.biortech.2015.06.132>
- Taherdoost, H. (2016a). *Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research*. **International Journal of Academic Research in Management (IJARM)**, 5(2), 18–27. <https://doi.org/10.2139/ssrn.3205035>

- Taherdoost, H. (2016b). *Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research*. **International Journal of Academic Research in Management (IJARM)**, 5(3), 28–36. <https://doi.org/10.2139/ssrn.3205040>
- Trawnih, A., & Bechcoum, K. (2018). *Technology Readiness Aspect of E-government in Developing Country: A Case Study of Jordan Municipalities*. **International Journal of Scientific and Research Publications (IJSRP)**, 8(12), 733–748. <https://doi.org/10.29322/ijsrp.8.12.2018.p8493>
- Vassil, K. (2015). **Estonian e-government ecosystem: Foundation, applications, outcomes**. World Development Report 2016.
- Weerakkody, V., & Choudrie, J. (2005). **Exploring E-Government in the UK : Challenges , Issues and Complexities**.
- Weerakkody, V., Choudrie, J., & Currie, W. (2004). **Realising E-Government in the UK : Local and National Challenges**. Americas Conference on Information Systems (AMCIS), 972–980.
- Yilmaz, K. (2013). *Comparison of quantitative and qualitativerResearch traditions: Epistemological, theoretical*. **European Journal of Education**, 48(2), 311–325. <https://doi.org/10.1111/jppi.12086>

Appendixes

A: Names of Interviewees

Name	Organization	Date of Interviews
Mr. Nizar Samhan	MDLF	30/9/2018
Mr. Raed Shakhshir	MDLF	30/9/2018
Mr. Munjid Blaibleh	MOLG	9/10/2018
Mr. Azzam Hjoui	MOLG	2/10/2018
Mr. Jehad Shakhshir	GIZ	10/10/2019

B: Questionnaire (Arabic)

بسم الله الرحمن الرحيم

جامعة النجاح الوطنية

كلية الدراسات العليا

برنامج الماجستير في "الإدارة الهندسية"

السادة / رئيس وموظفي البلدية المحترمين

تحية طيبة وبعد:

أرجو العمل على تعبئة هذه الاستبانة، والتكرم بإعطائها بعضاً من وقتكم لأهميتها، علماً بأن تعبئة هذه الاستبانة يأتي ضمن إجراءات دراسة علمية بعنوان:

“تقييم تطوير وتطبيق استراتيجيات البلديات الإلكترونية في فلسطين”

وتهدف الدراسة الى قياس مدى جاهزية وقبول وتبني البلدية الالكترونية في البلديات الفلسطينية بالاضافة الى معرفة التحديات التي تواجه التطبيق الجيد للبلدية الالكترونية، بما سينعكس ايجاباً على البلديات الفلسطينية.

وهذه الدراسة هي ضمن متطلبات الحصول على درجة الماجستير في الإدارة الهندسية. آمل من حضرتكم استيفاء تعبئة الاستبانة بوضع علامة (*) أمام الإجابة المناسبة. إن جميع البيانات الواردة في الاستبيان سرية للغاية ولن تستخدم إلا لأغراض البحث العلمي.

شاكراً لكم تعاونكم

وتقبلوا بفائق الاحترام،

الباحثة:

مرام موسى "سيد أحمد"

المشرف: أ. د. سمير أبو عيشة

برنامج الماجستير في الإدارة الهندسية

استبانة لدراسة مدى قبول وتبني البلدية الالكترونية

القسم الاول : المعلومات العامة والعوامل الاجتماعية

يرجى الإجابة عن الأسئلة التالية والتي تتضمن معلومات عامة تتعلق بالمستجيب من خلال وضع إشارة (*) في المكان المناسب.

- (1) الجنس: () ذكر () انثى
- (2) العمر: () 25 سنة الى 35 سنة () 36 سنة الى 45 سنة () 46 سنة الى 55 سنة () اكثر من 55
- (3) المؤهل العلمي: () الثانوية العامة () دبلوم () بكالوريوس () دراسات عليا
- (4) المركز الوظيفي: () رئيس البلدية () المدير () نائب المدير () مسؤول تكنولوجيا المعلومات () أخرى-----
- (5) عدد سنوات العمل في البلدية: -----
- (6) اسم البلدية: -----
- (7) المدينة / المحافظة: -----
- (8) التصنيف: () أ () ب () ج
- (9) عنوان الموقع (البوابة الالكترونية) الخاص بالبلدية: -----

القسم الثاني: أسئلة تتعلق في تنفيذ و تطوير البلدية الإلكترونية

يهدف هذا القسم الى دراسة ومعرفة بدايات تطبيق البلدية الإلكترونية في البلديات الفلسطينية، بالاضافة الى كيفية تطبيق هذا المشروع في داخل البلديات الفلسطينية والاستراتيجيات المتعلقة في تطبيقها والخدمات التي تقوم بتغطيتها البلدية الالكترونية.

- (10) البداية في تنفيذ وتطبيق مشروع البلدية الالكترونية عام: -----
- (11) البداية في تنفيذ مشروع البلدية الالكترونية كان: () ممولاً () ذاتياً
- (12) درجة التطبيق لمعايير البلدية الالكترونية في بلديتكم: () ضعيف () متوسط () عالي
- (13) هل يوجد استراتيجيات وخطط عمل محددة للوصول الى البلدية الالكترونية؟ -----

14) هل يوجد ضمن الخطط الاستراتيجية للبلدية خطط للوصول الى البلدية الالكترونية؟-----

15) خطط العمل (خطتكم) للوصول الى البلدية الالكترونية تتضمن:-----

16) الدافع في التفكير لتطبيق مشروع البلدية الالكترونية:-----

() خدمات البلدية الالكترونية تغطي اعمال البلدية () الداخلية والخارجية () الداخلية17
() الخارجية فقط

() مجالات تطبيق البلدية الالكترونية في () خدمة الاستفسارات () خدمة الشكاوي18

() عرض الفواتير الخاصة في المواطنين

() خدمات الحرف والصناعات والتراخيص

() الكهرباء و الماء (خدمات الجمهور)

() خدمات الشهادات

() خدمات الصحة والبيئة

() خدمات الدفع الالكتروني

() اخرى-----

19) تم الاستعانة بخبراء من خارج البلدية لتصميم البوابة الالكترونية للبلدية.-----

20) الشركات/ الخبراء الذين تم الاستعانة بهم لتصميم البوابة الالكترونية.-----

21) ما هو عدد المشاركات/ الحركات الداخلية (داخل البلدية) او الحركات الخارجية ذات الصلة بالبلدية
الالكترونية كمعدل يومي؟ -----

القسم الثالث: أسئلة تتعلق بالبلدية الالكترونية من الناحية الإدارية

يهدف هذا القسم الى معرفة مدى الفهم والرؤية والتوعية حول البلدية الالكترونية والى قياس العوامل الادارية والكفاءات البشرية والقوانين والتشريعات الداعمة لمشروع البلدية الالكترونية، ومدى قبول المشروع من قبل الادارات في البلديات الفلسطينية.

الرقم	العبرة	موافق بشدة	موافق	محايد	معارض	معارض بشدة
22	لدى البلدية خطة للتوعية بخدمات البلدية المقدمة الكترونيا					
32	تم اصدار نشرات تعريفية وتوضيحية في كيفية التعامل مع الخدمات الالكترونية					
24	تم عقد لقاءات وندوات ومؤتمرات حول البلدية الالكترونية					
25	هناك حاجة لزيادة الوعي حول مشروع البلدية الالكترونية					
26	الادراك الجيد بمزايا استخدام البلدية الالكترونية					
27	انت مقتنع بإمكانية اتمام معاملات المواطنين بدون الحضور لمقر البلدية					
28	هناك خطة مكتوبة لخطوات تطبيق وتنفيذ البلدية الالكترونية في بلديتكم					
29	يتم استخدام شبكات التواصل الاجتماعي للتوعية بمشروع البلدية الالكترونية					
30	الكفاءات البشرية المتوفرة في البلدية كافية لنجاح تطبيق مشروع البلدية الالكترونية					
31	الموظفون في البلدية قادرون على التعامل مع مشروع البلدية الالكترونية					
32	جميع الموظفون في البلدية لديهم القدرة على التعامل مع الحاسوب وبرامجه					
33	يعتبر توافر القوانين و التشريعات عاملاً مهماً لنجاح تطبيق مشروع البلدية الالكترونية					
34	توفر القوانين والتشريعات يغطي كافة الجوانب في مشروع البلدية الالكترونية					
35	عدم توفر تشريعات مناسبة يعتبر عائقاً امام تطبيق البلدية الالكترونية					

القسم الرابع: أسئلة تتعلق في البلدية الالكترونية من الناحية التكنولوجية

يهدف هذا القسم الى قياس مدى جاهزية البلدية لتطوير النظام الالكتروني ومدى قبول وتبني انظمة وتكنولوجيا جديدة تساعد في تطبيق و تنفيذ البلدية الالكترونية في البلديات الفلسطينية.

الرقم	العبارة	موافق بشدة	موافق	محايد	معارض	معارض بشدة
36	يوجد شبكة انترنت داخلية داخل البلدية					
37	تملك البلدية بنية تحتية لتكنولوجيا المعلومات والاتصال					
38	يوجد في البلدية متخصصون في تقنيات تكنولوجيا المعلومات بشكل كاف					
39	يتم استخدام احدث النظم والبرمجيات					
40	عدد اجهزة الحاسوب في البلدية مناسب لعدد العاملين فيها					
41	موقع البلدية الالكترونية (البوابة الالكترونية e-portal) دائم وفعال					
42	موقع البلدية يتم تحديثه بشكل مستمر					
43	جميع اجهزة الحاسوب مرتبطة بالشبكة الداخلية للبلدية					
44	يوجد في البلدية نظام للامن وحماية المعلومات					
45	هناك اهتمام بخصوصية وسرية البيانات الالكترونية في البلدية					
46	يتوفر نظام دفع الكتروني لتسديد المعاملات الخاصة بالبلدية					
47	اغلب المعاملات والمراسلات في داخل البلدية تتم من خلال منظومة الكترونية					
48	تشعر برغبة المتعاملين (المواطنين) مع البلدية في الحصول الخدمات الكترونيا					
49	الحاجة للقدوم الى البلدية من قبل المواطنين لمتابعة طلباتهم اصبح قليلا بعد اعتماد الخدمات الالكترونية و الحصول عليها من خلال التقديم عبر الموقع الخاص بالبلدية					
50	المعاملات و المراسلات بين البلدية والبلديات الاخرى والوزارات تتم من خلال منظومة الكترونية					
51	يتم استخدام تطبيقات الهواتف الذكية للتفاعل وتقديم الخدمات الكترونيا					

القسم الأخير: أسئلة تتعلق بالتحديات التي واجهت البلدية الالكترونية

يهدف هذا القسم الى معرفة التحديات التي تواجه تطبيق وتنفيذ البلدية الالكترونية في البلديات الفلسطينية، والى معرفة الدروس المستفادة من تطبيق البلدية الالكترونية، ومعرفة رغبة الادارات في الاستمرار في تطبيق المشروع داخل بلدياتهم.

* التحديات و العقبات التي واجهت تنفيذ مشروع البلدية الالكترونية:

(52) التحديات و العقبات التي واجهت تنفيذ مشروع البلدية الالكترونية:

(53) كيف تم التغلب على التحديات والعقبات التي واجهت تنفيذ مشروع البلدية الالكترونية:

(54) الدروس المستفادة من تطبيق مشروع البلدية الالكترونية:

(55) يوجد رغبة في الاستمرار أو التطوير في تطبيق مشروع البلدية الالكترونية:

(56) الدافع وراء الرغبة في الاستمرار في تطبيق البلدية الالكترونية:

(57) هل تعتقد أن تجربة تطبيق مشروع البلدية الالكترونية ناجحاً أم لا؟ -----

جامعة النجاح الوطنية

كلية الدراسات العليا

تقييم تطوير وتطبيق استراتيجيات البلديات الإلكترونية في فلسطين

إعداد

مرام موسى "سيد أحمد"

إشراف

أ. د. سمير أبو عيشة

قدمت هذه الأطروحة استكمالاً لمتطلبات الحصول على درجة الماجستير في الإدارة الهندسية،
بكلية الدراسات العليا، في جامعة النجاح الوطنية، نابلس - فلسطين.

2020

ب

تقييم تطوير وتطبيق استراتيجيات البلديات الإلكترونية في فلسطين

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الملخص

الحكومة الإلكترونية هي إحدى الأدوات التي برزت من التطور الكبير في قطاع تكنولوجيا المعلومات والاتصالات. وفي المقابل فإن البلدية الإلكترونية هي أنظمة الحكومة الإلكترونية التي تساعد البلديات على تقديم الخدمات بكفاءة وفعالية عبر الوسائل الإلكترونية (الإنترنت، الحاسوب، الهاتف المحمول، إلخ) للمواطنين.

لقد أولت فلسطين اهتماماً كبيراً للحكومة الإلكترونية ووضعت استراتيجية وطنية لتحقيقها. وقد بدأت العديد من البلديات الفلسطينية في التحول نحو البلدية الإلكترونية، ولكنها واجهت تحديات قد تتجاوز إمكانياتها.

تناولت هذه الدراسة الحاجة إلى تقييم تطبيق البلدية الإلكترونية، بما في ذلك جاهزية وقبول وتبني مبادرة البلدية الإلكترونية في هيئات الحكومة المحلية، وتحديد التحديات المتعلقة بتطوير وتنفيذ البلدية الإلكترونية، لوضع استراتيجيات لتلبية التحديات التي تعيق التطبيق الأمثل للبلدية الإلكترونية.

يتم تحقيق هدف الدراسة من خلال مراجعة وتقييم الإطار الاستراتيجي الذي تم تطويره للبلدية الإلكترونية الفلسطينية، من خلال تحليل SWOT، بالإضافة إلى تقييم جاهزية وقبول وتبني البلدية الإلكترونية في البلديات الفلسطينية باستخدام نموذج TAM. وقد اعتمد ذلك على المعلومات التي تم جمعها من خلال الوثائق والمقابلات مع خبراء من المؤسسات الفلسطينية، وكذلك توزيع الاستبانات في البلديات الفلسطينية.

تشير نتائج هذا البحث إلى أن نموذج TAM قد ساعد في تحديد الفائدة المتصورة، وسهولة الاستخدام المتصورة، ومستوى استخدام التكنولوجيا وتوافرها، والدعم الإداري والإداري، ومستوى الخدمات الإلكترونية، وتوافر القوانين والتشريعات، والموقف من البلدية الإلكترونية، وتأثير كل من هذه العوامل على التحول نحو البلدية الإلكترونية. وبالإضافة إلى ذلك، ساعدت عملية المطابقة بين العوامل الداخلية والخارجية للبلدية الإلكترونية في البلديات الفلسطينية، والتي تم التعبير عنها من خلال مصفوفة SWOT التي تم إعدادها، في صياغة مجموعة من الاستراتيجيات المقترحة لمواجهة التحديات التي تواجه التطبيق الأمثل للبلدية الإلكترونية.

