

Universidade do Minho
Escola de Engenharia

Ayman Abdul Hadi Alarabiat

Electronic Participation through Social Media
Citizens' Acceptance Factors at Local
Government Level

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Thesis submitted in fulfilment of the requirements for the award
of the doctorate degree of
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Thesis performed under the supervision of
Professor Delfina de Sá Soares
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DECLARAÇÃO

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É AUTORIZADA A REPRODUÇÃO INTEGRAL DESTA DISSERTAÇÃO APENAS PARA EFEITOS DE INVESTIGAÇÃO, MEDIANTE DECLARAÇÃO ESCRITA DO INTERESSADO, QUE A TAL SE COMPROMETE.

Guimarães, 30/07/2018

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STATEMENT OF INTEGRITY

I hereby declare having conducted my thesis with integrity. I confirm that I have not used plagiarism or any form of falsification of results in the process of the thesis elaboration.

I further declare that I have fully acknowledged the Code of Ethical Conduct of the University of Minho.

University of Minho, 30/07/2018

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Dedication



Because no one deserves it more than you

To my late father

May Allah have mercy upon your soul.

Oh..., if you know how much I wish that you were alive



Acknowledgment

All praise is due to Allah (God), the lord of the worlds, for giving me the courage, patience and strength to complete this PhD thesis.

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Abstract

Electronic Participation (e-Participation) initiatives, seen as the use of information and communication technologies (ICT) for facilitating citizen participation in the process of policy decision-making, have often had a limited success of citizens' engagement, particularly those initiatives sponsored by governments (government-led e-Participation initiatives). While the rapid growth of using social media networks, specifically Facebook, represented a new promising venue for enhancing citizens' participation, the problem of low-level citizens' acceptance and engagement remains. Hence, conceptual clarity on what factors affect citizens' acceptance of such initiatives are yet to be theorized. This study aims at investigating relevant factors that influence citizens' intention to accept and to engage in government-led e-Participation initiatives through Facebook, based on extended Theory of Planned Behavior (TPB) through the incorporation of a set of factors that emerged from relevant literature.

Using data from a survey of 400 Jordanian citizens, the quantitative results proved that citizen attitude (ATT), participation efficacy (PE), and perceived behavioral control (PBC) directly and positively affect citizen's intention to participate. Citizen attitude, in turn, is determined by participation efficacy (PE), perceived usefulness and compatibility of Facebook (PU and COMP), and perceived value of citizen's involvement in government-led e-Participation initiatives (PV). However, neither social norms (SN) nor citizen's trust in Facebook (CT_FB) have significant impact over citizen intention or attitude. Further, perceived value (PV) is influenced by perceived ease of use of Facebook (PEOU), and citizen's trust in government (CT_GOV). Additionally, the study found that Jordanian citizens uphold relatively high positive attitude toward engaging in government-led e-Participation initiatives through Facebook but they have a moderate intention to participate in those initiatives.

As the present work is one of very few studies addressing citizens' intention to accept and to engage in e-Participation initiatives through social media in government context, the study provides important implications for theory and practice.

Keywords: E-Participation, E-Government, Citizens Acceptance Factors, Facebook, Jordan

Resumo

Muitas das iniciativas de Participação Eletrônica (e-Participação) – vistas neste estudo como o uso das Tecnologias de Informação e Comunicação (TIC) para facilitar a participação do cidadão no processo de tomada de decisão política –, não têm conseguido alcançar o sucesso esperado no que concerne ao nível de envolvimento do cidadão atingido. Esta falta de envolvimento é particularmente evidente nas iniciativas lideradas e disponibilizadas pelos governos (iniciativas governamentais de e-Participação). Embora o rápido crescimento das redes sociais, especialmente do Facebook, seja apontado como um meio promissor para fomentar e melhorar o nível de participação do cidadão, o problema do baixo nível de aceitação e de envolvimento do cidadão em iniciativas de e-participação persiste. Importa, pois, compreender, conceptualizar e teorizar sobre os fatores que afetam o nível de aceitação evidenciado pelo cidadão em relação a esse tipo de iniciativas. Assim, é finalidade deste estudo investigar os fatores relevantes que influenciam a intenção dos cidadãos de aceitarem e de se envolverem nas iniciativas governamentais de e-Participação disponibilizadas através do Facebook, baseando-se na Teoria do Comportamento Planeado (Theory of Planned Behavior (TPB)), devidamente estendida pela incorporação de um conjunto de fatores relevantes que emergiram da literatura relevante.

Os resultados quantitativos de um questionário respondido por 400 cidadãos Jordanos, mostram que a atitude do cidadão (citizen attitude (ATT)), a eficácia de participação (participation efficacy (PE)), e o controlo comportamental percebido (perceived behavioral control (PBC)) afetam direta e positivamente a intenção de participação do cidadão. Por sua vez, a atitude do cidadão é determinada pela eficácia de participação (participation efficacy (PE)), utilidade percebida e compatibilidade do Facebook (perceived usefulness (PU) e compatibility (COMP)), e valor percebido do envolvimento do cidadão nas iniciativas governamentais de e-Participação (perceived value (PV)). Contrariamente, nem as normas sociais (social norms (SN)) nem a confiança do cidadão no Facebook (citizen's trust in Facebook (CT_FB)) têm impacto significativo na intenção e atitude do cidadão. Adicionalmente, o valor percebido (perceived value (PV)) é influenciado pela percepção de facilidade de utilização do Facebook (perceived ease of use (PEOU)) e pela confiança dos cidadãos no governo (citizen's trust in government

(CT_GOV)). O estudo mostra ainda que os cidadãos Jordanos apresentam uma atitude positiva em relação ao envolvimento em iniciativas governamentais de e participação disponibilizadas através do Facebook mas apresentam uma intenção moderada de participar em tais iniciativas.

Por ser um dos poucos trabalhos conhecidos focado no estudo da intenção dos cidadãos de aceitarem e de se envolverem em iniciativas governamentais de e-Participação disponibilizadas através das redes sociais, o estudo aqui descrito aporta contribuições relevantes para o desenvolvimento do conhecimento teórico e prático no domínio da participação eletrónica.

Palavras-chave: E-Participação, Governo Eletrónico, Fatores de Aceitação dos Cidadãos, Facebook, Jordânia.

List of Publications

Partial results of this research work have been already published:

Alarabiat, A., Sá Soares, D., and Estevez. E. (2017). **Predicting Citizens Acceptance of Government-led e-Participation Initiatives through Social Media: A Theoretical Model.** in Proceedings of the Hawaii International Conference on System Sciences. January 4-7, 2017. Hawaii, USA, pp. 2855–2864.

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Abbreviations and Acronyms

ATT	Attitude
AVE	Average Variance Extracted
BI	Behavior Intention
COMP	Compatibility
CR	Composite Reliability
DOI	Diffusion of Innovation
e-Democracy	Electronic Democracy
e-Government	Electronic Government
e-Participation	Electronic Participation
EGDI	E-government Development Index
EPI	E-Participation Index
FC	Facilitating Conditions
ICT	Information and Communications Technologies
IS	Information System
M	Mean
IT	Information Technology
OECD	Organisation for Economic Cooperation and Development
PBC	Perceived Behavior of Control
PE	Participation Efficacy
PEOU	Perceived Ease of Use
PU	Perceived of Usefulness
PV	Perceived Value
R²	R Square
SE	Self-Efficacy
SD	Standard Deviation
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
VIF	Variance Inflation Factor
UN	United Nations
USA	United States of America
UTAUT	Unified Theory of Acceptance and Use of Technology

1. CHAPTER ONE: INTRODUCTION

1.1 Preface

The principle of e-Participation can be easily understood as providing an online environment where citizens and other relevant stakeholders, such as governments officials and politicians, can more easily communicate, interact and be involved in the public decision-making process (Macintosh and Whyte, 2008; Sæbø et al., 2008; Sanford and Rose, 2007). However, the practical implementation of e-Participation initiatives is not as simple as it may seem (Macintosh and Whyte, 2008). As pointed out by many researches, a continuing challenge for e-Participation initiatives is a lack of participation by citizens (Panopoulou et al., 2010; Sæbø et al., 2008; Sanchez-Nielsen and Lee, 2013; Tambouris et al., 2012, 2013). Several studies and reports emphasize the lack of attention on citizens' needs in e-Participation initiatives, and questions if the citizens actually want or /and could they use the tools of e-Participation that governments offer (Edelmann and Cruickshank, 2012; Hoffman, 2012; OECD, 2009; Sæbø et al., 2008; Sanchez-Nielsen and Lee, 2013; United Nations, 2014).

This thesis concerns with e-Participation initiatives in government context, specifically government-led e-Participation initiatives or “top-down” initiatives. According to Macintosh and Whyte (2008), “top-down” initiatives is one of two forms of e-Participation, which is the responsibility of government and it is also primarily driven and enacted by governments.

What seems to be clear that, till now, governments have multiple deficiencies in relation to interact with citizens in a way that fits with what citizens really prefer (Charalabidis and Loukis, 2011; Feeney and Welch, 2012a; Koussouris et al., 2011; Macintosh et al., 2009a; Mergel, 2012a; Panopoulou et al., 2009; Prieto-Martín et al., 2012; Tambouris et al., 2013). Recently, social media networks (e.g., Facebook, Twitter, Youtube, etc.) have shown the unique ability of providing a new communication way for governments to interact with citizens (Albrecht, 2012; Landsbergen, 2010; Sadeghi, 2012). For many scholars, citizens, mainly the younger, are actually interested in discussing public topics in social media platforms, since they are familiar with these digital spaces, rather than visit government websites (Calenda and Meijer, 2009; Charalabidis et al., 2014; Dini et al., 2016). Hence, social media is seen as a way to bridge the gap and to mend the common separation between government and citizens (Bertot et al., 2010a, 2012a; Dini and Øystein, 2016; Mergel, 2012a; OECD, 2007; Sæbø et al., 2009; United Nations,

2016). Consequently, governments have been encouraged to make steps towards following citizens where they are rather than expecting them to come to their “official” spaces (Charalabidis and Loukis, 2011; Ferro and Molinari, 2010; Ferro et al., 2013).

In this sense, social media is believed to play significant role in promoting and fostering citizens engagement in government-led e-Participation initiatives (Alarabiat et al., 2016a; Bertot et al., 2010b; Boudjelida et al., 2016; Dini and Øystein, 2016; Sæbø et al., 2009). Nevertheless, once again, the lack of citizens engagement in government-led participation initiatives through social media is still evident and it is extensively reported in many studies (Berntzen and Johannessen, 2016; Boudjelida et al., 2016; Charalabidis and Loukis, 2011, 2015; Dini and Øystein, 2016; Khan et al., 2014; Lacigova et al., 2012; Larsson, 2013a; Mergel, 2012a; Nam, 2012a; Sæbø et al., 2011; Tambouris et al., 2013; Wahid and Sæbø, 2015). So, as the rise of using social media, particularly Facebook, for supporting government-led e-Participation initiatives does not always result in increased levels of citizen participation (Bonsón et al., 2015; Charalabidis et al., 2012; Dalakiouridou et al., 2012; Khan et al., 2014; Panagiotopoulos et al., 2011), the studying of government-led e-Participation initiatives through social media represents an interesting theme calling for future examination.

Globally, the most of governments are widely relying on Facebook to implement e-Participation initiatives more than other social media networks (Bonsón et al., 2015; Boudjelida et al., 2016; United Nations, 2014, 2016). Accordingly, the thesis addresses citizens’ low-level acceptance to engage in government-led participation through Facebook (as a representation of other social media networks).

The relevance of the thesis is supported by the fact that the desirable participation level is mainly and firstly conditioned by citizen acceptance to participate (citizen intention to participate). Several prior e-Participation researches demonstrated citizens’ acceptance as among the challenges to the successful implementation of e-Participation applications, but it has been overlooked (Edelmann and Cruickshank, 2012; Ferro and Molinari, 2010; Medaglia, 2012; Rose and Sanford, 2007; Sæbø et al., 2008). Recently, there is strong evidence that governments have placed little attention on the understanding citizens’ needs when compared with the advance of delivering technical ICT solutions (Karantzeni and G. Gouscos, 2013; Prieto-Martín et al., 2012; Susha and Grönlund, 2014). Further, while e-Participation initiatives through social

media have been explored from politicians' and government officials' perspective, empirical studies on the topic from the citizens' point of view are limited.

Citizens participation occurs in a complex socio-technical and political environments that needs comprehensive view to be understood (Macintosh et al., 2009a; Sæbø et al., 2008), particularly those implemented through social media (Dini and Øystein, 2016; Sæbø et al., 2009). This indicates that e-Participation is far more than simply introducing new technologies (Macintosh and Whyte, 2008; Mustafa Kamal, 2009; Sæbø et al., 2008), and other non-technical factors – e.g. personal, social, behavior, and political – may have a significant impact on citizens' acceptance and engagement (Alathur et al., 2016; Edelman and Cruickshank, 2012; Freschi et al., 2009; Macintosh and Whyte, 2008).

In literature, there are very few studies have explored the core factors that influence citizens' acceptance to engage in government-led e-Participation initiatives through social media, specifically through Facebook. Therefore, since the successful implementation of such initiatives is unlikely to be realized without extensive citizen acceptance at the first place, the thesis argues that the factors influence citizen's acceptance to engage in government-led e-Participation initiatives through Facebook need to be properly understood and examined. Further, there is few theory-driven empirical research in e-Participation literatures tackling the citizens' intention or acceptance issues in this domain. The present thesis contributes to the body of knowledge by examining the technological, behavioral, and social factors affecting citizens' decisions on whether to accept or refuse participating on e-Participation through Facebook, aiming to broaden our understanding and knowledge in this domain.

To move in this direction, the thesis theoretical assumption is based on the theory of planned behavioral (TPB) – a theory that seeks to understand and predict why a person perform or not perform particular behaviors (Ajzen, 1991). The thesis also follows information system (IS) behavioral science paradigm – a paradigm that focus on how and why a user accept to use or not to use a particular system (von Alan et al., 2004). IS research focus does not only involve the studying of how a particular IS works, but also involves how and why people decide to use or not to use such a particular system (acceptance) (Alter, 2003; Hirschheim, 1985).

As TPB shows a high capacity for explaining and predicting an individual acceptance behavior in various contexts (Al-Debei et al., 2013; Hung et al., 2013; Ozkan and Kanat, 2011; Taylor and Todd, 1995), and user's acceptance has always remained as a critical stream in IS research (Venkatesh et al., 2012), such interweaving of TPB and IS perspectives within e-Participation context is believed that could offer deeper insights in the way to explain and to understand the main factors that influence citizens' intentions to accept and to engage in government-led e-Participation initiatives through Facebook.

In following, Section 1.2 precisely introduces the study problem and identifies how it is going to be addressed in the thesis. Section 1.3 presents the structure of the thesis.

1.2 Study Problem

For now, citizens' engagement in e-Participation initiatives through social media is not up to expectations. The majority of government-led e-Participation initiatives through social media do not deliver the intended outcomes relating to attract high number of citizens and failed to attain limited participation of those who attracted; the common problem in both developed and developing countries (Bonsón et al., 2015, 2016; Charalabidis and Loukis, 2015; Dini and Øystein, 2016; Ferro and Molinari, 2010; Khasawneh and Tarawneh, 2016). In thus, "**the low citizens' acceptance to engage in government-led e-Participation initiatives through Facebook**" is the main problem that will be addressed in this study.

One of major important e-Participation research challenge is to understand the dual nature of e-Participation as a two-sided process. On one side it is about citizen's willingness and acceptance to participate deeper and wider in policy making (Edelmann and Cruickshank, 2012; Ferro and Molinari, 2010; Medaglia, 2012; Rose and Sanford, 2007; Sæbø et al., 2008); on other side it is about government ability and capability to include citizens' contributions into the machinery of policy making (Bertot et al., 2010a, 2012a; Feeney and Welch, 2012a; Mergel, 2013b). Without understanding what motivates citizens to be involved in e-Participation initiatives, governments will not be able to take strategic actions to increase the e-Participation up-take.

Several researches have emphasized the significant role of citizens, since the citizens are one of the most important actor in e-Participation (Flak et al., 2007; Johannessen et al., 2012;

Sæbø et al., 2008; Sanford and Rose, 2007), being their activity a basic requirement to impact public policies and political decisions (Verba et al., 1995). According to Sæbø et al. (2008), the citizen is the focal point of e-Participation (Sæbø et al., 2008). The literature review conducted in this study (Section 3.3.3) reveals that the majority of e-Participation through social media researches in e-Government context is giving more consideration to the analysis of issues on the government side [e.g. (Feeney and Welch, 2012a; Hofmann et al., 2013; Mergel, 2013a; Oliveira and Welch, 2013)] rather than to the perceptions on the recipients side – a perspective deserving further research (Charalabidis et al., 2014; Hofmann et al., 2013; Sanchez-Nielsen and Lee, 2013). Yet, to date, little attention has been given towards understanding e-Participation initiatives through social media, specifically from citizens perspective (Alarabiat and Soares, 2016; Medaglia, 2012; Sæbø et al., 2009; Susa and Grönlund, 2012). Such findings have been significant enough to merit further investigation as have done in the current study.

To explain why citizens' intention to accept and to engage in government-led e-Participation initiatives through social media does not materialize, the earlier traditional explanations regarding citizens' political participation as well citizens' acceptance of e-Government systems appear very helpful. The arguments follow. According to Verba et al. (1995), citizens do not politically participate primarily because they do not want (willingness), they cannot (ability), or because nobody has asked them to participate (Verba et al., 1995). In e-Government context, a related explanation seems entirely supportive; the success of e-Government system firstly depends upon the citizens' willingness to accept and then to adopt this innovation (Carter and Bélanger, 2005).

Interestingly, prior e-Participation literature review studies concur, citizens' acceptance, which in turn create an effective engagement, played a significant role in determining the success of an e-Participation initiatives (Medaglia, 2012; Sæbø et al., 2008). According to those authors reviews, e-Participation does not just depend on the availability technical tools, but also on the willingness of citizens to accept and then adopt it as a normal form of interaction with governments. Therefore, citizens' acceptance to engage in e-Participation initiatives is one significant aspect should be considered (Cruickshank and Smith, 2011; Edelman and Cruickshank, 2012; Macintosh and Whyte, 2008; Mustafa Kamal, 2009).

Based on the above discussion, the current thesis addresses the identified problem by deriving an analytical model in which citizens' acceptance can be understood, explained, and predicted. The proposed model is primarily based on TPB (Ajzen, 1991), TPB theory is believed to have a high explanatory power and prognostic capability with respect to explaining and predicting human behavior (Morris et al., 2012) Then, by got more inspiration from IS behavioral science paradigm that emphasizes the role of the environment in which the interaction between the users and the technology occurs (von Alan et al., 2004; Lee, 2001), the model is extended by several factors drawn from related research areas such as sociology, psychology, e-Participation, e-Government, political science, IS and information technology (IT). Such combination is seen as responding to calls for integrated a balanced psychology and sociology perspectives with technological one when studying e-Participation topics (Edelmann and Cruickshank, 2011; Macintosh et al., 2009a), in addition to overcome internal disciplinary boundaries that currently characterize e-Participation research (Susha and Grönlund, 2012).

More specifically, the model is derived based on extending TPB main constructs: Attitude (ATT), Subjective Norms (SN), and Perceived Behavior Control (PBC) through the inclusion of: Perceived Value of citizen's involvement in e-Participation initiatives (PV), Participation Efficacy (PE), Perceived Ease of Use of Facebook (PEOU), Perceived Usefulness of Facebook (PU), Compatibility of Facebook (COMP), Citizen Trust in Facebook (CT_FB), Citizen Trust in Government (CT_GOV), and Facilitating Conditions (FC). The model then will be tested through conducting empirical quantitative research using online survey from citizens in Jordan.

Next section introduces the structure of the thesis, which explains the road map for conducting the thesis.

1.3 Structure of the Thesis

This thesis consists of seven chapters. **Chapter 1** briefly introduces the current study in Section 1.1 and precisely stated the study problem in Section 1.2. The flow of this thesis, as illustrated in Figure 1 is structured as follows:

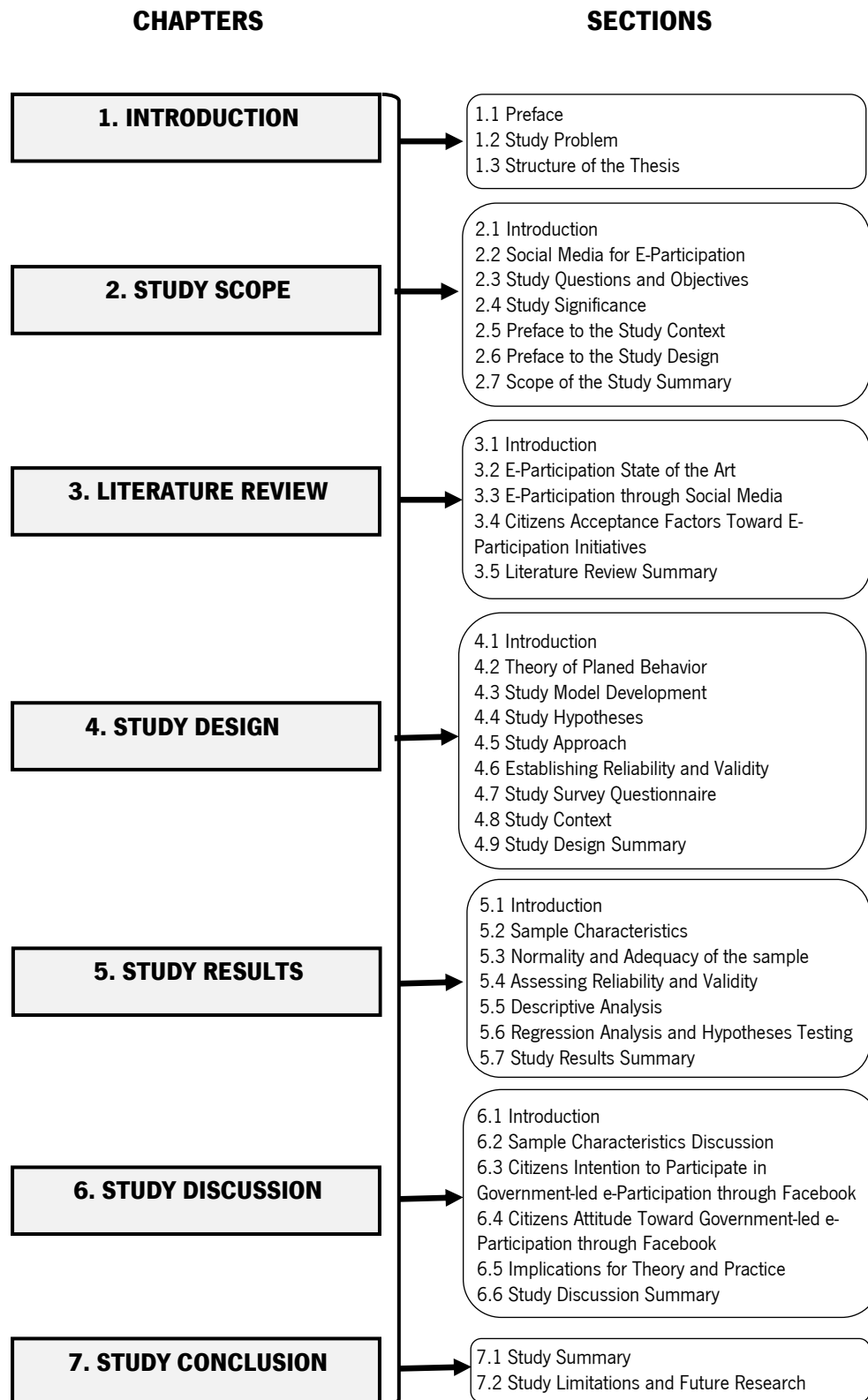


Figure 1. The Structure of the Thesis

Chapter 2 presents the study scope includes the introducing the notion of social media for e-Participation in Section 2.2. Section 2.3 states the study questions and objectives. Section

2.4 highlights the study significance. Section 2.5 briefly introduces the study context by highlighting general justifications to consider Jordan's local governments e-Participation initiatives through Facebook as the current study context. Section 2.6 provides a preface of the research design and methodology. Finally, Section 2.7 concludes Chapter 2.

Chapter 3 presents a review of the existing literature of e-Participation research area. The chapter reviewed research topics presented in area of e-Participation with a particular focus on e-Participation through social media. More specifically, Section 3.2 reports e-Participation literatures state of the art and Section 3.3 discusses specific findings and identify milestones of e-Participation through social media studies. Then, Section 3.4 identify the factors that expected to influence citizens' acceptance toward engaging in government-led e-Participation initiatives. Finally, Section 3.5 summarizes Chapter 3.

Chapter 4 presents the design process that has been followed in the current study, which includes nine sections. Section 4.1 briefly introduces the meaning of study design process. Section 4.2 provides an explanation and justification concerning the use of TPB as a steering theory guided the current study. In Section 4.3, the development of the study model has been described. The related hypotheses have been proposed and the justification for each of those hypotheses associated with the study model is provided in Section 4.4. The chapter continues by discussing the adopted research approach for the execution of the current study in Section 4.5. The section provides the rationality behind choosing a quantitative approach to serve the purposes of the current study. Following that, Section 4.6 discusses both reliability and validity as two rigor aspects of the quantitative research. Then, Section 4.7 is assigned for providing comprehensive description of the study survey questionnaire. In this section, the study questionnaire development, wording, and translation were discussed in details. The section is concluded by explaining the adopted online questionnaire. As more in-depth studies around e-Participation cross cultural and national variations is needed, Section 4.8 presents Jordan as the choosing context for the study. The section also discusses the reasons of why the current study focuses on Facebook rather than other social media networks for e-Participation initiatives. The section continues by defining the study population and sample. Finally, Section 4.9 summarizes and concludes Chapter 4.

Chapter 5 presents the quantitative results of the study. After introducing the chapter in Section 5.1. Section 5.2 presents demographic characteristics of the study sample. Section 5.3 discusses the normality and the adequacy of the study sample to ascertain the sample's appropriateness for running quantitative analysis. Sections 5.4 assesses the validity and reliability of the study quantitative results. Followed by summarizing descriptive analysis of the study constructs in Section 5.5. Section 5.6. presents the results of regression analyses and hypotheses testing. Finally, Section 5.7 summarizes Chapter 5.

Chapter 6 offers detailed discussion of the study results. Initially, the chapter revisits the study questions (identified in Section 2.3) and hypotheses (proposed in Sections 4.4) to establish the link with the findings. Based on the discussions, both the significant and non-significant hypotheses are explained and interpreted by considering existing literatures. Further, several implications for theory and practice were presented.

Chapter 6 is organized as follow. Section 6.2 discussed in details the characteristics of the study sample along with providing related comparisons with 12 selected e-Participation/e-Government research surveys in Jordan. Section 6.3 answers and discusses the study questions 1 and 2 and related hypotheses concerning citizens' intention to engage in government-led e-Participation initiatives through Facebook. Section 6.4 answers and discusses the study questions 3 and 4 and related hypotheses concerning citizens' attitude toward engaging in government-led e-Participation initiatives through Facebook. The chapter continues by presenting key implications for theory and practice in Section 6.5. Finally, Section 6.6. concludes Chapter 6.

Finally, **Chapter 7** provides the study conclusion in Section 7.1 and identifies the study limitations and suggests future research directions in Section 7.2.

2 . CHAPTER TWO: STUDY SCOPE

2.1 Introduction

This chapter aims to introduce scope of the study for creating a clear view over the main interests of the study. The chapter is organized as follows. Section 2.2 provides a general overview of the idea of using social media for e-Participation. Sections 2.3, 2.4, and 2.5 present the study questions and objectives, preface to the study context, and the study significance respectively. The chapter continue for explaining the study design in Section 2.6. Finally, Section 2.7 summarizes the chapter.

2.2 Social Media for E-Participation

Social media is “a group of Internet-based technologies that allows users to easily create, edit, evaluate and/or link to content or other creators of content” (Kaplan and Haenlein, 2010, p. 61). Social media include but not limited to, social networking (e.g. Facebook), micro-blogging (e.g. Twitter), video sharing (e.g. YouTube), wikis (e.g. Wikipedia,) and photo sharing (e.g. Instagram and Flickr). Social media refers to the means of interactions among people in which they create, share, and exchange information and ideas in virtual online communities and networks (Ellison and Boyd, 2013). Perhaps such features that allow users not only being content readers but also content generators and publishers may explain that there around 2.5 billion social media active users in the world¹, with more than 1.8 billion people logged on to Facebook in a single day², which mean "1 in 7 people on Earth used Facebook".

The significant global changes that have occurred over the last years, in respect to the intensively popularity of social media is fundamentally changing how people socialize, communicate, shop, and participate in public affairs (Thomas and Sheth, 2011). In fact, citizens have already begun using these social channels to express themselves politically (Vickery and Wunsch-Vincent, 2007), and much of citizens' political and civic discussions have been conducted outside governmental websites, namely in social media networks (Ellison and Hardey, 2013; Macintosh et al., 2009a; Mishaal and Abu-Shanab, 2015; Rainie et al., 2012; Smith and

¹ <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>

² Facebook news room <http://newsroom.fb.com/company-info/>

Dalakiouridou, 2009). The Pew Internet and American Life project reports that 39% of Americans have performed at least one political activity via social media (Rainie et al., 2012), likewise considerable public debate about European affairs goes on those networks (Smith and Dalakiouridou, 2009). In Arab region, approximately 58% of citizens express their views or regarding their government's policies using social media, specifically through Facebook (Arab Social Media Report, 2017). Therefore, as private organizations have started using social media to communicate with their customers and clients, citizens begin to expect government to do the same (Charalabidis et al., 2012; Johannessen, 2010b). Consequently, governments are under more pressure to catch-up with these advancements.

Governments tend to use social media since such platforms are easily accessible by citizens who are already very present and familiar with those platforms. These platforms are also cost efficient since they do not require high investment costs for governments. More importantly, with social media networks large user base, free cost, and no complex skills are needed to use them, they widely considered as an effective mean or intermediary for governments to reach and to communicate with their citizens (Boudjelida et al., 2016; United Nations, 2014, 2016). This might explain that 2956 Facebook pages, 1016 Twitter accounts, and 695 YouTube channels have been created by 698 American federal departments and agencies (Mergel, 2012b). Approximately two-thirds of the USA local governments have a social media presence (Norris and Reddick, 2013), and around 80% of the USA public sector organizations had employed at least one social media networks (Snead, 2013).

Social media popularity is indubitable, beside its capacity to provide much interactions fora (Kaplan and Haenlein, 2010), what makes them good candidates for use in the e-Participation area (Sæbø et al., 2009) and enable e-Participation projects to become more visible and reachable from mass audiences otherwise hard to reach (Karantzeni and G. Gouscos, 2013; Lacigova et al., 2012). Thus, the use of social media can be considered as a logical choice for filling in the gaps that prevent e-Participation from becoming successful. Accordingly, several researchers, such as (Macintosh et al., 2009a; Medaglia, 2012; Sæbø et al., 2009; Susha and Grönlund, 2012; Tambouris et al., 2012), and transnational institutions, such as the Organization for Economic Co-operation and Development (OECD) and the United Nations (UN), emphasize the need for more actions towards the investigation of this trend in e-Participation.

Moved by such idea, 152 countries out of 193 (four out of five) integrated social media into their national portals or websites, according to the latest UN E-Government survey 2016 (United Nations, 2016). The survey continue to show that social media tools availability on national web sites and portals is becoming a routine practice for the majority of governments, regardless of their countries income and development status (United Nations, 2016). The UN 2014 survey shows that social media has emerged as a powerful e-Participation platform with 118 countries using it for e-consultation, indicating a 400 per cent increase as compared to the 14 countries in 2012 (United Nations, 2014). These two significant trends are set to continue in the next few years. A recent study of Boudjelida et al. (2016) after reviewing 182 papers that were published until 2015, the authors have found that social media are the most tools used to conduct e-Participation initiatives (Boudjelida et al., 2016).

In summary, the rapid adoption of social media by governments is remarkable (Mossberger et al., 2013). Social media are thus seen as a new breadth for e-Participation (Guttormsen and Sæbø, 2013; Macintosh et al., 2009a; Millard, 2009; Sæbø et al., 2009), eventually leading to a second generation of broader, deeper, and more advanced e-Participation initiatives (Charalabidis et al., 2014). Therefore, it is not surprising that many voices have been raised up calling for the linking of social media and e-Participation (Karantzeni and G. Gouscos, 2013; Lacigova et al., 2012; Sæbø et al., 2009). In this respect, social media has been adopted in e-Participation context.

2.3 Study Questions and Objectives

The main aim of the study is to investigate the factors influence citizens' intention and attitude to accept and to engage in government-led e-Participation initiatives through Facebook. The study concerns with an investigating citizens' intention (acceptance) and not citizen's actual involvement (adoption) in e-Participation initiatives for the following reasons:

First, using social media in e-Participation is still an emerging phenomenon, particularly in government context (Wahid and Sæbø, 2015), and in many countries such initiatives are only in an infancy stage (Charalabidis et al., 2014), specifically in Jordan (Abu-Shanab and Al-Dalou,

2016; Al-Quraan and Abu-Shanab, 2015; Khasawneh and Tarawneh, 2016), what means that citizens may have little or no awareness that such initiatives exist³.

Second, considering mandatory versus voluntary contexts, e-Participation is a voluntary activity of citizens (Axelsson et al., 2010; Coleman et al., 2008; Edelman and Cruickshank, 2012; Macintosh and Whyte, 2008; OECD, 2009; Sæbø et al., 2008), the intention to use may be a more appropriate dependent variable in volunteered usage environments (Brown et al., 2008; Delone and McLean, 2003).

Third, the concepts of acceptance and adoption have been usually used interchangeably particularly in e-Government studies (Hofmann et al., 2012; Rana et al., 2012, 2013). Nevertheless, in the area of information systems (IS) those concepts are distinct. According to Venkatesh et al. (2003), the adoption comes after direct experience with the technology and after an individual (potential user) has decided to accept using this technology.

Fourth, based on measuring citizens' intention, as provided by TPB, we can predict the potential of citizens engagement when e-Participation initiatives become available or when citizens become aware of them (Mkude and Wimmer, 2015). The IS literatures concur, intention to use has been found to be a strong predictor of actual systems usage (Davis, 1989; Venkatesh et al., 2003).

The study aims to answer the following four research questions:

Question 1: What is citizens' intention to engage in government-led e-Participation initiatives through Facebook?

Question 2: What are the factors considered relevant to influence citizens' intentions to engage in government-led e-Participation initiatives through Facebook?

Question 3: What is citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?

³ Interestingly, the current study found that only half of Jordanian citizens who participated in the survey stated that they aware about the existence of such initiatives.

Question 4: What are the factors considered relevant to influence citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?

To realize the above aim and answer the research questions, the following objectives will be pursued in the study:

Objective 1: To establish the state of art of e-Participation through critically review the published literature in e-Participation with a particular focus on e-Participation through social media. Such review is essentially important to better understanding of e-Participation filed includes; 1) better understanding of the field, 2) creating the current research boundaries, 3) pursuing and accurate identifying the research problem, and 4) the analysis of relevant studies concerning citizens limited participation in order to determine the potential factors that expected to influence citizens' intentions to engage in government-led e-Participation initiatives through social media (Facebook). Chapter 3 produces a review to achieve such objective.

Objective 2: To build and derive a theoretical model for scoping citizen's acceptance in e-Participation contexts. The study proposes citizen's centric acceptance model that is believed to governments for planning and implementing effective e-Participation initiatives through Facebook. Chapter 4, specifically Section 4.3 produce a model to achieve such objective.

Objective 3: To use the proposed conceptual model for conducting an empirical research using a quantitative approach to identify the effect of each identified factors on citizens' intention and attitude to engage in e-Participation through Facebook in the context of Jordanian local government sector. Chapter 5 have been approached to attain such objective.

Objective 4: To analyze and discuss the information collected which enable us to offer suggestions and recommendations regarding the ways in which these identified factors can be effectively managed and effectively considered to increase the take up of e-Participation initiatives through Facebook. Chapter 6 meets this objective.

2.4 Study Significance

The current thesis demonstrates a contribution to knowledge in the field of e-Participation since it is one of the first studies that addresses the issue of citizens' intention to engage in

e-Participation in its own right and abreast with social media in government context. There are others key significance for the current thesis work.

- 1) Recently, e-Participation is more than only concerns of political topics or voting in elections, it is comprehensively about citizens' involvement in government decision making process and in shaping government public policies (Criado et al., 2013; Medaglia, 2012; Sæbø et al., 2008; Sandoval-Almazan and Gil-Garcia, 2012; Sanford and Rose, 2007; Sussha and Grönlund, 2012). Although a vast body scholarly research has widely confirmed that the focal point of e-Participation is a means of facilitating greater citizen participation in policy decision-making processes (Sæbø et al., 2008; Tambouris et al., 2013; Wahid and Sæbø, 2014), much has been written around politicians-citizens' interaction and political activities of e-Participation (i.e., e-campaign and e-voting). Few studies have captured and investigated e-Participation initiatives sponsored by government. Recently calls for a broad scope, which implies that the political activities should not be the most or the only important topics for e-Participation research. (Alarabiat et al., 2016a; Sussha and Grönlund, 2012). The current study contributes to more plurality and diversity in e-Participation research as it focuses on e-Participation in government context.
- 2) Pioneer e-Participation scholars stress the necessity of a multi-disciplinary approach, in which e-Participation domain can greatly benefit from other disciplines (Macintosh and Whyte, 2008; Macintosh et al., 2009a; Medaglia, 2012; Sussha and Grönlund, 2012). However, few researchers have adopted multiple perspectives when studying e-Participation topics. This led to the increase of the internal disciplinary boundaries that currently characterize e-Participation research (Sussha and Grönlund, 2012). In this sense, approaching the phenomenon of citizens' involvement in e-Participation initiatives through Facebook in a multi-disciplinary way, as is done in this study, seems to be a rational decision.
- 3) One of the main significance aspect of this work is that the e-Participation field can get inspiration and obtain benefits from methods, theories and approaches in traditional IS research concerning user acceptance (and later, adoption and continuous use). In a complex phenomenon such as citizen participation, it appears that neither the technological nor the social perspective alone can be successful when investigating and implementing e-Participation initiatives (Macintosh et al., 2009a; Sanford and Rose, 2007; Sussha and

Grönlund, 2012). Significantly, such approach is closely connected to the key assumption of IS research; that the core of IS research investigates the phenomena that emerge when the technological system and the social system interact (Lee, 2001). Specifically, it is more connected to behavioral science paradigm that seek to understand, explain, predict human behavior and examine the interactions between user and technology to achieve its specified purpose (von Alan et al., 2004).

Briefly, a characteristic that distinguishes IS from other fields is that it concerns the use of artifacts in human-machine systems. Lee (2001, p iii) uses these words:” research in the information systems field examines more than just the technological system, or just the social system, or even the two side by side; in addition, it investigates the phenomena that emerge when the two interact”. In thus, IS research examines the interactions between user and technology artifacts to achieve its specified purpose, with considering the environment in which that interaction occurs, (behavioral science paradigm) (von Alan et al., 2004). This investigation is done by comprehensively looking at the combination of technology, information, people, process, environment, and management that affect user’s intention toward specific system (Heeks, 2002; Heeks and Bailur, 2007). Therefore, this study contributes to the knowledge of e-Participation by adopting multi-disciplinary approach through providing a citizen-centric acceptance model specifically developed for of e-Participation context.

- 4) The latest reviews of e-Participation literature suggests an ongoing shift of the research from a more purely technological focus to a more holistic view, where other social and technological issues could be integrated to investigate citizens’ acceptance and engagement (Medaglia, 2012; Susha and Grönlund, 2012). The knowledge of IS confirms; the social and behavioral factors frame the uses of new digital tool or system (Avgerou et al., 2004). Social media studies by their part concur, social media with e-Participation requires more psychology views (Ellison and Boyd, 2013; Xie, 2014). In fact, so far, identifying and investigating those dimensions have attracted limited researchers attentions (Medaglia, 2012; Susha and Grönlund, 2012). Therefore, the study contributes to the knowledge by investigation citizens’ acceptance and engagement from socio-technical perspective.

- 5) There are few investigations and lack of in-depth information about the reasons behind limited citizens' engagement in e-Participation initiatives, particularly those implemented through social media. While the problem is widely acknowledged, a few studies had focused on such problem. This lack, probably, due to major fallacy belief that simply introducing available and obtainable e-Participation tools, including social media, will directly motivate citizens to engaged (Sæbø et al., 2008, 2011; Sanchez-Nielsen and Lee, 2013). Conversely, the citizens do not always will and/or able to participate (OECD, 2009; Sanchez-Nielsen and Lee, 2013). Such assumption, similar to previous argument, which based on the idea that citizens participation does not would be increased just because the citizens have access to suitable technologies (Irani et al., 2007; Komito, 2005). The same that the quantity of computers in any one place is no sure indication of internet access; similarly, availability of e-Participation tools does not ensure that the citizens are using it.

Understanding why citizens are not willing to engage with government-led e-Participation initiatives through social media, and investigating citizens' acceptance and intention to participate is an essential step to analyze actual levels of citizens' participation. On the one side, too often it is assumed that such initiatives begin and end basically with the provision of an online presences and creating social media profiles for disseminating information, with limited government commitment and weak strategies to foster dialogues with citizens over these networks (Bonsón et al., 2015; Mergel, 2013a).

On the other side, there is a trend to believe that citizens will get involved without due consideration of their preferences, needs and expectations (OECD, 2007, 2009; Sanchez-Nielsen and Lee, 2013). This is probably caused by one major deceptive notion that citizens will and/or want to participate immediately when they are just given e-Participation tools (Edelmann and Cruickshank, 2012; Sæbø et al., 2008; Sanchez-Nielsen and Lee, 2013). In this respect, the Organization for Economic Co-operation & Development explains that not all citizens are willing to participate; certain citizens segments are able but unwilling to participate (OECD, 2009). Consequently, despite the expectation that the usage of social media would bring e-Participation to a new stage (Alarabiat and Soares, 2016; Charalabidis et al., 2014; Dini and Øystein, 2016; Hofmann et al., 2013; Mergel, 2013a; Sæbø et al., 2009), a low level of success has been reached and citizens involvement is still quite limited (Bonsón et al., 2015; Hofmann et al., 2013; Mossberger et al., 2013; OECD, 2007).

2.5 Preface to the Study Context⁴

The notion of e-Participation has become a highly issue in the public sphere, and that social media is expected to be more and more integrated in e-Participation development. Nevertheless, several studies found that government sector is still lagging behind in the adoption of social media compared to the earlier adoption by private sector (Bonsón et al., 2012, 2015; Larsson, 2013a; Mergel, 2012a), especially in developing countries (United Nations, 2014, 2016), in Arabic countries (Arab Social Media Report, 2014), and more particularly in Jordan (Khasawneh and Tarawneh, 2016; Khasawneh and Abu-Shanab, 2013).

In terms of context, Jordan represents an interesting case for this study since:

- The most current e-Participation researches were conducted in developed or western countries. Jordan, like other developing countries, is widely being neglected within e-Participation research (Al-Hujran et al., 2014; Alomari, 2016; Criado et al., 2013; Sæbø et al., 2009; Wahid and Sæbø, 2014). Thus, it is necessary to expand future studies to developing countries context.
- Despite the growing importance of e-Government, a humble attention has been given towards e-Participation initiatives in Jordan (Jordan E-Government, 2013; Majdalawi et al., 2015). For now, e-Participation projects either in national or local level are still immature within the Jordanian environment, which indicates that more work need to be done and further exploration is indeed required (Abu-Shanab and Al-Dalou, 2016; Al-Hujran et al., 2014; Al-Quraan and Abu-Shanab, 2015; Bataineh and Abu-Shanab, 2016; Khasawneh and Tarawneh, 2016). Those researches has revealed that e-Participation initiatives are facing many serious challenges, mainly the limited citizens' involvement in those initiatives. Clearly, the Jordanian government entities appear to face several difficulties to benefit from social media networks for its' e-Participation

⁴ Section 4.8 provides comprehensive discussions about the current study context.

project. In fact, there is a huge gap between what Jordanian government entities offer, in related to e-Participation activities, and what citizens' needs, wants, and expectations.

The current study concerns with local government level since:

- Local government or Municipalities are a promising area for e-Participation (Al-Aama, 2015; Wahid and Sæbø, 2014), since it is the space where occur most of the interactions between citizens and their elected representatives (Koussouris et al., 2007). Indeed, local government plays an important role in their citizens daily lives, including both administrative-services (Pina and Torres, 2001) and democratic participation (Musso et al., 2000; Sáez Martín et al., 2015). Therefore, local government provides greater opportunity for consultation and dialogue between government and citizens (Johannessen et al., 2016; Macintosh and Whyte, 2006; Wahid and Sæbø, 2014).
- The number of municipalities that have been using social media, in particular Facebook, to meet citizen needs, have significantly grown (Bonsón et al., 2015; Feeney and Welch, 2012a; Guttormsen and Sæbø, 2013; Johannessen et al., 2012; Mossberger et al., 2013). Referring to a survey of 2009, conducted on 255 European e-Participation projects, 30% of e-Participation projects were at local level (Panopoulou et al., 2009). For the just mentioned reasons, it was considered as an important issue to focus this research project at the level of local government. We clearly contribute to the academic discussion by future gathering and providing empirical data in this specific field.

For the purposes of this study, Facebook was preferred against other social media platforms since:

- Facebook is a massive popular social networks and seems to be as the most promising platforms for government for creating information access and easy ways of interacting with citizens (Bonsón et al., 2015; Mossberger et al., 2013). As mentioned earlier, the majority of governments worldwide are widely experimenting with Facebook for their e-Participation initiatives more than other social media networks (Bonsón et al., 2015; Boudjelida et al., 2016; United Nations, 2014, 2016). Hence, the government entities of Jordan are not far a way of that trend, almost all Jordanian government units are

using Facebook rather than other social media networks (Btoush, 2014; Khasawneh and Tarawneh, 2016; Mishaal and Abu-Shanab, 2015).

- Facebook represents a rapidly growing phenomenon that touches upon several aspects of Jordanian lives. Facebook dominates the social landscape in Jordan. Based on seventh edition of Arab social media report 2017, Facebook is the most popular social media network in the country with around five million users (Arab Social Media Report, 2017). Comparing Facebook popularity with other social media networks, for example Twitter, the report shows that around 1,685,000 new Jordanian Facebook users between 2014 and 2017. Meanwhile, only 26,000 new Twitter users in the same period in Jordan. Twitter users in the country hardly represent 2% of the population (Arab Social Media Report, 2017).

As concluding comment, Jordan government entities have not found yet its' own path for utilizing social media popularity among Jordanian for the purposes of interact with them (Btoush, 2014; Khasawneh and Tarawneh, 2016; Khasawneh and Abu-Shanab, 2013). A recent pilot study has found that only 19.4% of Jordanian liked or followed Jordanian e-Government official page on Facebook, and 62.7% of them did not know that such page has already existed primarily (Khasawneh and Tarawneh, 2016). Generally, Jordanian e-Participation initiatives fail to keep pace with full utilizing of various social media for opening additional channels to reach and communicate with citizens (Abu-Shanab and Al-Dalou, 2016; Al-Quraan and Abu-Shanab, 2015; Bataineh and Abu-Shanab, 2016; Khasawneh and Tarawneh, 2016).

2.6 Preface to the Study Design

The study design (often called research design) can be best viewed as a string logical process and precise guidelines that link and bridge collected data to address the research problem, to answer the research questions, to meet the research aims, and ultimately, to drawn research conclusion (Bhattacharjee, 2012; De Vaus and de Vaus, 2001; Kerlinger, 1986; Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013). Research design is such as blueprint or general plan for the collection and analysis of data that allow researchers to

hit "the bull's eye" of their study problem, questions, and aims (Bhattacharjee, 2012). The "holy grail" of a research design is minimizing the threat of drawing incorrect casual conclusions, and implementation from collected data (De Vaus and de Vaus, 2001).

The research design process includes a series of steps such as, 1) selecting an appropriate theory that guides the study, 2) defining the constructs or factors to be measured along with the development of the model and hypotheses, 3) determining research methodology to be adopted, which includes the type of data and how they will be collected (the research instrument), and determine how to verify the rigor aspects of the research instrument. 4) defining the study context and the sampling strategy along with the chosen the sample size. Following that, each of these issues will be approached in Chapter 4, Study Design. Next, each of these issues is briefly introduced.

In what concerning the steering theory of the thesis, TPB developed by (Ajzen, 1991) was selected as the guided of this work, in order to understand citizens' behavioral intention and attitude to engage in government-led e-Participation initiatives through Facebook,. The TPB serves as the theoretical foundation for this study since it deals with the complexities of human social behavior through seizing social and behavioral factors (Taylor and Todd, 1995). The suitability of TPB for the current study is further discussed in **Section 4.2**.

Based on TPB, along with a literature review, a conceptual model was proposed. The conceptual model was developed and consists of factors that were delineated based on a review of established research. The model applies the main constructs of the theory (ATT, SN, and PBC), and extended by several constructs drawn from relevant literature: PV, PE, PEOU, PU, COMP, CT_FB, CT_GOV, and FC. The development of the study model and formulation the study hypotheses were extensively presented in **Sections 4.3 and 4.4**.

Historically, the research methodologies are categorized as being quantitative, qualitative, or mixed approaches in nature (Creswell, 2013; Sekaran and Bougie, 2010; Zikmund et al., 2013). The central role of research methodology is to choose the right approach for collecting data to the right questions and aims. Since the selection of the research approach is mainly determined by questions, aims and the nature of the research topic (Benbasat et al., 1987), the

quantitative approach was selected for this study. The suitability of quantitative approach for the current study is further discussed in **Section 4.5**.

The central role of a research is to chase the truth by producing a solid, truthfulness, trustworthy, and validated findings (Benbasat et al., 1987). Typically, in quantitative research, two primary validation measurements which will be addressed in this work; Reliability and Validity of measures. Reliability concerns of assuring the stability and consistency of findings. Validity focuses on assuring the truthfulness and legitimacy of the findings (Straub, 1989; Straub et al., 2004). Literature suggests that IS quantitative research to have three groups of validity: (1) content validity; (2) construct validity includes convergent validity and discriminant validity; (3) design validity includes internal and external validity (Boudreau et al., 2001; Straub, 1989; Straub et al., 2004). Further details around establishing and the results of reliability and validity of the study are presented in **Section 4.6**.

In this study, a quantitative research methodology using a survey questionnaire is selected as the primary data collection method. The result of the survey questionnaire will allow us to validate the study model, verify the proposed hypotheses, answer the study questions and meet the research aims. In this work, a well-structured questionnaire was developed corresponding to the study questions and objectives. The content validity of the questionnaire was confirmed through three academic experts to judge items' appropriateness for measuring intended study constructs and suggested some changes to be more valid. Online survey has been purported to be a primary mean of collecting data due to the thesis large population which require an efficient way that assure collecting sufficient number of respondents. The questionnaire was built on "Google Drive", and it was disseminated through Facebook. Comprehensive information about the study survey questionnaire development are provided in **Section 4.7**.

The study context will be approached in **Section 4.8**. The population of the study is the Facebook users in Jordan. In Jordan, around 93% of social media users have considered Facebook as their favorite site (Arab Social Media Report, 2014, 2015). Such figures indicate that the country represents high "Facebooking" nation in the world. The rationality behind the decision of conducting the study in Jordan and using Facebook as a representation of other social media networks in the current study is discussed in the section. At the end, the section explains several steps that have been followed to ensure a good sampling design for gathering

needed data, which are: determining the study population, shaping the sampling frame, selecting sampling technique, determine sample size, and executing the sampling process.

2.7 Scope of the Study Summary

This chapter determined the scope of the study through introducing the study problem, study questions and objectives, study context, study significance, and study design.

The study aims to investigate the factors influence citizens' intention and attitude to accept and to engage in government-led e-Participation initiatives through Facebook. Accordingly, the study will propose a citizen-centric model primarily based on TPB and extended by several factors drawn from relevant literatures. The study aim will be achieved by conducting an empirical research using a quantitative approach to identify most relevant factors and investigate their effect on citizens' attention and attitude to engage in e-Participation through Facebook in the context of Jordanian local government sector. By doing that, the study attempts to add significantly to knowledge and practice of e-Participation by shedding light on social, behavior, technical, and environmental factors.

Next is the review of the existing literature of e-Participation research area.

3 . CHAPTER THREE: LITERATURE REVIEW

3.1 Introduction

The chapter fulfills the first objective of the current thesis—critically review the published literature in the area of e-Participation with a particular focus on e-Participation through social media. The chapter is structured as follows. Section 3.2 presents general state of the art of e-Participation field, while specific review of e-Participation through social media are introduced in Section 3.3. Section 3.4 concerns with the analysis of relevant studies to identify the factors that expected to influence citizens' acceptance toward engaging in government-led e-Participation initiatives. Finally, Section 3.5 summarizes the chapter.

3.2 E-Participation State of the Art

This section aim to generate a general overview of the state of the art in e-Participation field. The review is presented in four subsections: e-Participation background (Section 3.2.1), e-Participation concept (Section 3.2.2), general analysis of e-Participation research (Section 3.2.3) and e-Participation projects and initiatives (Section 3.2.4).

3.2.1 E-Participation Background

A vast body of scholarly research has documented the tendency for empowering citizen influence over policy, that was started to be performed in the late of 1960s, when the book of Arnstein, titled “A Ladder of Citizen Participation”, was published (Arnstein, 1969). Since then, citizen participation has been a subject of intensive debate and discussions in the fields of political and administrative sciences (Suh, 2002). From one view, it as a citizen action that influences policy decisions (Nagel, 1987), from another it as an action that incorporates into public administrative services (Zimmerman, 1986).

In its relatively short history, the shift towards using ICT for citizen participation mainly boosted when the concept has been introduced by Macintosh, who raised the issue of whether e-Participation is the new imperative for enhancing democracy and how could democracy be profiting from technology (Macintosh, 2004). Contrary to more traditional participatory procedures and channels, modern technologies provide the opportunity to reach wider audiences in a more accessible way, at any time, and from anyplace (Macintosh, 2004).

The major objectives of e-Participation are: (1) to reach a public as wide as possible, (2) to support participation through multi-channel facilities that help citizens use their different technical and communication skills, (3) to provide relevant information that will facilitate the understanding, access, and use of information, and (4) to encourage users to play an active part in public debates (Macintosh, 2004).

The research field of e-Participation as an emerging field of research has been in a phase of rapid development and enrichment (Medaglia, 2012; Sæbø et al., 2008; Sanford and Rose, 2007; Susa and Grönlund, 2012). A search in Google Scholar on Macintosh (2004) published work titled "Characterizing E-Participation in Policy-Making", one of the earliest and most fundamental publication in the field, has gathered 618 citations in May 2017 – added 164 new citations to the 454 citations that was in January, 2017. Another prominent work of Sæbø et al. (2008) titled "The shape of e Participation: Characterizing an emerging research area", has also gathered more than 411 citations in May 2017, which added 35 new citations in four months. Another research was done through Google Scholar using keywords of "e-Participation" and "Electronic Participation" shows that, on average, four new e-Participation studies have been published every month during the interval period (January 2011- May 2017).

In practice, the concept of e-Participation is one of top of the agenda for many e-Government and Open Government strategies. In this sense, a growing number of governments, and other formal policy making stakeholders, have adopted several e-Participation initiatives and projects for more interaction with citizens. Nowadays, majority of governments worldwide presenting themselves online in order to provide information, deliver electronic services, and to interact with their citizens (United Nations, 2014, 2016). In Europe, recent studies identified the existence of around 255 e-Participation initiatives from 23 European countries until 2010 (Panopoulou et al., 2010). Around 53 e-Participation initiatives have been funded with over one 120 million euros by European Union (Tambouris et al., 2008).

3.2.2 E-Participation Concept

Research into e-Participation is widespread across many discipline areas, such as e-Democracy, e-Government, and Open Government. Additionally, there are many international organizational and governmental reports published on e-Participation and many research

programs financed and launched. Because of this, the current landscape of published information related to e-Participation is both fragmented, unstructured, and, in some cases, confusing. Subsequently, it brings a number of different understanding, knowledge, philosophies and research traditions inside the e-Participation field (Flak et al., 2007; Freschi et al., 2009; Johannessen, 2013; Macintosh et al., 2009a; Medaglia, 2012; Millard, 2009; Sæbø et al., 2008; Sanford and Rose, 2007; Susha and Grönlund, 2012; Tambouris et al., 2013). Therefore, it is understandable that various definitions and perceptions for e-Participation exist in literature.

The early e-Participation literatures were mostly concerned with examination the potential of ICT for increasing citizens' political participation, namely increasing citizens voting in elections and/or in political debates (Sæbø et al., 2008; Sanford and Rose, 2007). So, e-Participation is frequently associated with forms of political participation and voting (Macintosh, 2004). The currently general perception is that representative democracy in developed countries is on decline, especially in European countries (Brücher and Baumberger, 2003; Johannessen, 2010a). This perception is reinforced by recently statistical studies and reports which show a dramatic declining in vote turn. Lately, vote-turnout in the 2014 European Union countries elections was the lowest ever recorded, at just 42.54%⁵. In this sense, e-Participation has been broadly dedicated to remedy what is widely known as “democratic divide”, where only parts of citizens are involved in politics and democratic discourse (Macintosh, 2004; Macintosh et al., 2009a).

However, e-Participation can be concerns with non-political actions and issues (Berntzen and Johannessen, 2016; Sæbø et al., 2008; Sanford and Rose, 2007; Tambouris et al., 2013). Nowadays, e-Participation is a broader research area which could be seen – beside the election and interaction with politicians – as the use of ICT to increase the interaction between citizens and their governments, and, most importantly, to accelerate intensity and the frequency of direct citizens' involvement in decision-making process about the daily operations of government activities (Alarabiat et al., 2016a; Berntzen and Johannessen, 2016; Bonsón et al., 2012; Sæbø et al., 2008; Sandoval-Almazan and Gil-Garcia, 2012; Sanford and Rose, 2007; Wahid and Sæbø, 2014). This view is based on what earlier established by Sæbø et al. (2008), who demonstrated

⁵ <http://www.euractiv.com/section/eu-elections-2014/news/it-s-official-Hast-eu-election-had-lowest-ever-turnout/>

that one of the major purpose of e-Participation is to increase citizens' abilities to participate in digital governance (Sæbø et al., 2008).

In the literature, there is an absence of an agreed concept of e-Participation, as well as there is lack of clear boundaries between e-Participation partner field; e-Government and e-Democracy. So, the definition for e-Participation that will be adopted specifically for the purposes of this study is the following: **"the use ICT to facilitate and support citizen engagement in a democratic policy decision making process, even such processes may concern administrative or political topics"** (Macintosh and Whyte, 2008; Macintosh et al., 2009a; Sæbø et al., 2008; Tambouris et al., 2013).

By this definition, the point of view of this thesis is that; e-Participation aims in addition to increase citizens' interaction with politicians and public officials, it also aims to enhance citizen engagement in government decision-making processes. In other words, the thesis advocates that e-Participation is to enhance citizen participation into political affairs, by its specific activities and tools (e.g., e-voting, e-campaign, etc.) likewise to enhance citizens' participation in decision-making process about various government public policies and activities. For example, citizen participation in decision related to develop a "COVE" of five acres, located near of a Norwegian city centre (Johannessen, 2012; Johannessen et al., 2016).

3.2.3 General Analysis of e-Participation Research

Research on e-Participation has grown exponentially since 2004. Through the years (2004-2017), the focus of research works on e-Participation can be broadly classified into three timeline streams, with some supported reference examples, as follows:

- 1) 2004-2008** – Early studies on the e-Participation field tended to focus on defining the e-Participation concept (Macintosh, 2004; Macintosh and Whyte, 2006; O'Donnell et al., 2007; Sanford and Rose, 2007), proposing relevant frameworks and models (Islam, 2008; Macintosh and Whyte, 2008; Phang and Kankanhalli, 2008; Tambouris et al., 2007), and assigning appropriate tools for each e-Participation level (Macintosh et al., 2005; Wimmer, 2007). While most of those papers tends to provide general introductions to the e-Participation concept, scope, and overviews of e-Participation frameworks and models, we still witness some attempts at proposing comprehensive models (Porwol et al., 2013, 2014;

Xenakis and Loukis, 2010). During this period, there have been prominent attempts to identify the identity challenge of the field (Medaglia, 2007a). Generally, most of such studies follow in depth case studies (Colombo, 2010) and qualitative approaches.

2) 2008-2012 – While e-Participation concept continued to be under debate and development (Grönlund, 2009; Macintosh and Whyte, 2008; Sæbø et al., 2008), during this period the field captured more scholars' attention and showed some maturity signs related to the nature and the aim of e-Participation research. For instance, a high priority has been given towards systematizing the field, addressing research gaps, and driving future research directions, e.g. (Macintosh et al., 2009a; Medaglia, 2012; Sæbø et al., 2008; Sussha and Grönlund, 2012). Furthermore, different initiatives or projects studies have been evaluated (Fedotova et al., 2012; Freschi et al., 2009; Medaglia, 2007b; Prieto-Martín et al., 2012; Sæbø et al., 2010, 2011), some of them have been conducted through big scale surveys (Millard, 2009; Panopoulou et al., 2009, 2010). In addition, opportunities for using social media were explored (Charalabidis and Loukis, 2011; Effing et al., 2011; Johannessen, 2010a; Lacigova et al., 2012; Panagiotopoulos et al., 2011; Sæbø, 2011; Sæbø et al., 2009). One significant work presented by (Johannessen and Munkvold, 2012) who provided an analyses of socio-technical capabilities of social media for supporting e-Participation activities. Finally, it is worth noting that new path has started focusing on broaden the classical scope of e-Participation (e-Government and e-Democracy) to other research interests like tourism and cultural heritage (Ricciardi and Lombardi, 2010).

3) 2012-2017 - During this time, more studies evaluated various e-Participation initiatives (Bershadskaia et al., 2013; Kipenis and Askounis, 2015; Sussha and Grönlund, 2014). As highlight, more debate was raised concerning the e-Participation field biases' around political process or activities as the central interest of e-Participation system (Alarabiat et al., 2016a; Åström et al., 2012; Sæbø et al., 2008; Sanford and Rose, 2007). Therefore, several studies have given more attention toward enhancing citizen participation in digital governance, especially within the area of local governments (Berntzen and Johannessen, 2016; Bonsón et al., 2012; Fedotova et al., 2012; Guillamón et al., 2016; Johannessen et al., 2012, 2016; Norström and Hattinger, 2016; Reddick and Norris, 2013a; Wahid and Sæbø, 2014; Zheng et al., 2014) and in the context of the smart city or smart municipality (Berntzen and Johannessen, 2016).

Local governments face the area where diversity of citizens interact, with the lowest barriers for civic engagement (Johannessen et al., 2012; Lidén, 2015; Reddick and Norris, 2013a; Sandoval-Almazan and Gil-Garcia, 2012). While social media is being used increasingly by local governments, they are facing major challenges on how to adopt and use social media for e-Participation purposes (Bonsón et al., 2012; Guillamón et al., 2016; Johannessen et al., 2016). In fact, from government side, introducing and implementing new idea like e-Participation, specifically through social media, face with serious complications stemming from complex socio-economic determinants of government entities, personal and political ideology of government officials that permit sharing power with citizens (Khan et al., 2014; Yi et al., 2013), government forms (Zheng et al., 2014), governments administrative and organizational style, changes in legal regulations and policies (Guillamón et al., 2016), and permeate of traditional bureaucracy (Bertot et al., 2012a; Guillamón et al., 2016; Mergel, 2013a).

Still, we witness further attempts at proposing comprehensive e-Participation models (Porwol et al., 2014), as well as identifying e-Participation tools for each e-Participation level (Al-Dalou and Abu-Shanab, 2013). More attention has been given towards studying government initiated e-Participation, it also been labeled as “top-down” initiatives that are sponsored and driven by government institutions (Macintosh and Whyte, 2008). Through such initiatives, governments aim to use various ICT such as online polls, online surveys, and online discussion form to attract and encourage more citizens to engage in policy decision making (Alharbi et al., 2016; Al-Hujran et al., 2014; Ali et al., 2015; Bataineh and Abu-Shanab, 2016; Khan et al., 2014; Nam, 2012a). Such studies views e-Participation as part of e-Government services run by government or it is available at government websites as a major channel to e-Participation practices (Khan et al., 2014). Some recent studies have been conducted in some Arabic countries to explore how citizens perceive e-Participation initiative and practices through e-Government website, such as in Jordan, (Abu-Shanab and Al-Dalou, 2016; Al-Hujran et al., 2014; Al-Quraan and Abu-Shanab, 2015) investigate the factors that affect citizens' acceptance and readiness to use e-Participation tools in Bahrain (Ali et al., 2015), and investigate the factors that may influence the adoption of e-Participation in Saudi Arabia (Alharbi et al., 2016).

During this time, more attempts to broaden the scope of e-Participation for other contexts rather than classical ones (e-Government and e-Democracy) have been increased such as in higher and secondary education setting and processes (Bohman et al., 2014; Sideri et al., 2017), in sport (Uran et al., 2016), and in environmental protection initiatives (Bojovic et al., 2015; Royo et al., 2014; Wehn and Evers, 2015). Such attempts appear to expand e-Participation themes beyond merely the political level and given more attention for the role of new active stakeholders rather than politicians like students, farmers, educational leaders, tourists, and tourism workers. In fact, the term citizen participation in decision making appeared earlier in health research, i.e. in 2002 (Church et al., 2002) and is still used (Williamson, 2014).

Finally, more attention was dedicated towards the use of social media in e-Participation initiatives (Alarabiat et al., 2016a; Dini and Øystein, 2016; Dini et al., 2016; Effing et al., 2013, 2016; Guttormsen and Sæbø, 2013; Johannessen, 2014; Panagiotopoulos et al., 2014; Rustad and Sæbø, 2013; Wahid and Sæbø, 2015; Wakabi and Grönlund, 2015).

3.2.4 E-Participation Projects and Initiatives

Governments worldwide fight against their citizens' political apathy and try to restore their trust – particularly in developed countries (Smith, 2013). E-Participation has attracted considerable attention from governments, particularly in Europe, being seen as a way to increase openness and transparency in their decision making processes, to enhance citizens political participation and, consequently, to address the growing democratic deficit (Åström and Karlsson, 2016; Macintosh, 2004; Macintosh and Whyte, 2008; Panopoulou et al., 2010; Smith and Dalakiouridou, 2009; Tambouris et al., 2013). Recent analysis study of two e-Participation cases in Sweden and Finland, indicates that e-Participation can motivate and bring back citizens (in particular those who are interested in politics but dissatisfied with democracy) to participate (Åström and Karlsson, 2016).

In Europe, there were 255 e-Participation initiatives until 2010 (Panopoulou et al., 2009, 2010), which have been funded with millions Euros (Tambouris et al., 2008). Despite such great interest, in Europe findings show that e-Participation projects generated low participation at very high cost (Andersen et al., 2007; Prieto-Martín et al., 2012), and the majority of them basically

were conducted through information provision (Panopoulou et al., 2009; Smith and Dalakiouridou, 2009). Various studies that showed that European e-Participation initiatives apparently failed to meet expectations (Millard, 2009; Prieto-Martín et al., 2012; Sæbø et al., 2011; Susa and Grönlund, 2014) particularly in reaching and sustaining wider audiences (Sæbø et al., 2011), a low level of success has been reached and citizens involvement still limited (Bonsón et al., 2015; Mossberger et al., 2013; OECD, 2007).

Some studies investigated such European e-Participation initiatives limited success. According to Susa and Grönlund (2014), the lack of citizens involvement might be a result of giving more attention towards delivering technical ICT solutions than to the understanding of citizens' needs. The success of e-Participation depends on understanding the stakeholders', including citizens' needs, particularly to participate (Sanchez-Nielsen and Lee, 2013). Others found that the reasons were due to the highly sophisticated e-Participation tools and to the weak communication means that were used to reach and to interact with citizens in such projects (Karantzeni and G. Gouscos, 2013; Prieto-Martín et al., 2012). A positive impact has been observed between providing citizens with attractive and easy-to-use e-Participation tools and their participation rate (Lacigova et al., 2012). In other words, citizens' using of e-Participation has been influenced by their technological capability to use such tools (Medaglia, 2012). Other studies, however, demonstrates that the limited amount of administrative support available (such as small staff) can be a potential reason that might affect such projects success to sustain citizen's participation (Federici et al., 2015). Related results declare a lack of necessary social media and e-Participation skills among Swedish public officials (Norström and Hattinger, 2016). For that, a recent study conducted in Italy and Spain specifically at local government level, suggests that e-Participation initiatives through social media requires qualified employees to manage such initiatives (Guillamón et al., 2016). Arabic countries are not an exception, a recent report released related to citizens perception towards government use of social media has indicated that lack of government employee capacity and training in Arabic countries is one of the top challenges facing citizen engagement with government entities through social media (Arab Social Media Report, 2014).

In conclusion, there is a common agreement among e-Participation scholars' concerning ICT capabilities as interested path for enhancing citizen participation (Scherer and Wimmer, 2014). However, this digital affording has not always increase citizen participation (Macintosh et

al., 2009a; Prieto-Martín et al., 2012; Sæbø et al., 2011; Sanchez-Nielsen and Lee, 2013; Tambouris et al., 2013). Despite of all the research done and of all the hundreds of highly cost e-Participation projects conducted till now (Macintosh, 2007; Macintosh et al., 2009a; Millard, 2009; Panopoulou et al., 2010; Sæbø et al., 2008; Sanchez-Nielsen and Lee, 2013; Tambouris et al., 2012, 2013). Yet, such projects could not be widely characterized as "successful". A number of case studies and surveys reinforce such argument that e-Participation initiatives and projects are suffering of low citizens' involvement (Panopoulou et al., 2009; Prieto-Martín et al., 2012; Tambouris et al., 2008, 2013). The majority neither has not delivered expected results toward creating actual interaction with citizens and attain tangible citizens' influences into policy making process (Macintosh et al., 2009a; Prieto-Martín et al., 2012; Sanchez-Nielsen and Lee, 2013; Tambouris et al., 2013).

3.3 E-Participation through Social Media

This section fulfills the second aim of this review—investigating e-Participation through social media initiatives. The literatures were classified into three dimensions: 1) e-Participation through social media, where e-Participation is high relatively considered as independent research area, 2) e-Participation through social media in political sphere, where e-Participation is considered as integral part of e-Democracy and 3) e-Participation through social media in administrative sphere, where e-Participation is viewed as integral part of e-Government. The three dimensions are depicted in Figure 2.

The first dimension could be justified as a responding for defining some boundaries, which in results contribute on developing and realizing the field "self-identity" (Susha and Grönlund, 2012). The selected process of a literature in this dimension was based on basic criteria that each paper should caught e-Participation as the central subject of discussion and within social media. The second and the third dimensions have been mainly derived based on the works of (Sæbø et al., 2008; Sanford and Rose, 2007). According to those authors, e-Participation appears through interactions between the civil society sphere and the formal politics sphere, and between the civil society sphere and the administration sphere. In those dimensions, each paper should has given considerable discussions for e-Participation along within social media. Consequently, the outcome of this classification is presented in Table 1.

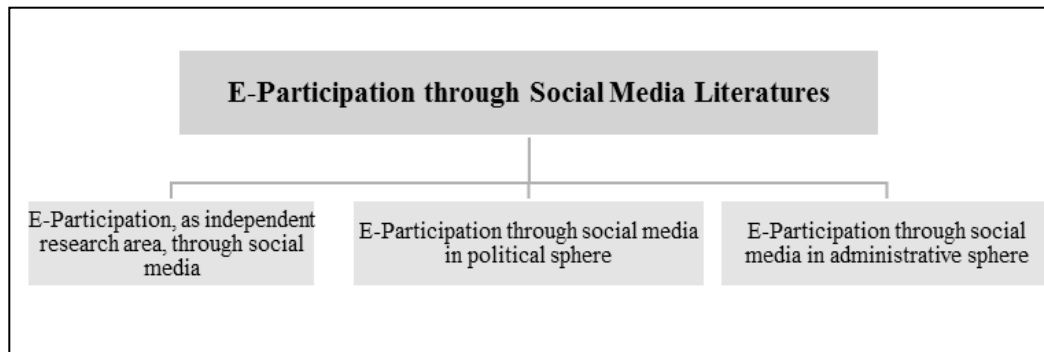


Figure 2. E-Participation through Social Media Literature Dimensions

Table 1. Distribution of Literatures per e-Participation through Social Media Dimensions

CATEGORY	MAIN FOCUS	SAMPLE LITERATURES
E-Participation through social media (E-Participation as an independent research area)	Political issues still a central interest of e-Participation studies (e.g. e-campaigns and e-voting).	(Al-Aama, 2015; Alarabiat and Soares, 2016; Alarabiat et al., 2016a; Charalabidis and Loukis, 2011; Charalabidis et al., 2014; Dalakiouridou et al., 2012; Dini and Øystein, 2016; Dini et al., 2016; Effing et al., 2011, 2013, 2016; Guttormsen and Sæbø, 2013; Johannessen, 2010a, 2014; Johannessen and Følstad, 2014; Johannessen and Munkvold, 2012; Johannessen et al., 2016; Lacigova et al., 2012; Norström and Hattinger, 2016; Panagiotopoulos et al., 2011, 2014; Rustad and Sæbø, 2013; Sæbø, 2011; Sæbø et al., 2009; Wahid and Sæbø, 2015; Wakabi and Grönlund, 2015)
E-Participation through social media in political sphere. (E-Participation as integral part of e-Democracy)	Open a new communication channel with citizens, increase citizen engagement in political e-campaign, gaining votes	(Bayraktutan et al., 2014; Di Fraia and Missaglia, 2014; Frame and Brachotte, 2015; Gustafsson, 2012; Hong and Nadler, 2012; Koc-Michalska et al., 2014; Larsson, 2013a, 2013b; Larsson and Kalsnes, 2014; Mergel, 2012c; Parisopoulos et al., 2012; Rainie et al., 2012)
E-Participation through social media in administrative sphere (E-Participation as integral part of e-Government/Open Government)	Enhance government e-service delivery, boost government openness and transparency	(Bertot et al., 2012b; Bonsón et al., 2012, 2015; Chouikh et al., 2016; Criado et al., 2013; Feeney and Welch, 2012b; Freeman, 2013; Guillamón et al., 2016; Gulati et al., 2014; Hansen-Flaschen and Parker, 2012; Khan et al., 2014; Mcnutt, 2014; Mergel, 2012a, 2013a; Reddick and Norris, 2013a; Sanchez-Nielsen and Lee, 2013; Stamati et al., 2015; Valle-Cruz and Sandoval-Almazán, 2015; Yi et al., 2013).

Based on the analysis, Table 2 provides general findings related to three dimensions to make it easy to map such topic. A general analysis of the selected literatures in Table 2 shows that there are three challenges of e-Participation through social media should be understood. **First**, the field of e-Participation research focus more on political activities and rarely examine the adoption of e-Participation through social media that sponsored and driven by governments. **Second**, e-Participation initiatives through social media within e-Democracy context are might be considered as communication initiatives rather than truly citizens' participation. **Third**, e-Participation through social media initiatives in government context are widely employed as an information and service provision initiatives rather than actual citizen participation government decision making process.

Table 2. The Main Findings per e-Participation Dimension

DIMENSION	MAIN FINDINGS and REFERENCES SAMPLE
E-Participation as independent research area	<ul style="list-style-type: none"> • Politicians-citizens' interaction and political activities (e.g. e-campaigns and e-voting) are the central interests of majority of studies in this dimension. For example, (Effing et al., 2011, 2013, 2016; Johannessen, 2014; Sæbø, 2011). • Little attention towards other e-Participation activities (e.g. e-information, e-consultation and online decision making) in government context. For example, (Al-Aama, 2015; Wahid and Sæbø, 2015).
E-Participation as integral part of e-Democracy	<ul style="list-style-type: none"> • Politicians often employ e-Participation through social media initiatives as additional communication channel. In particular, to promote themselves and to gain citizens votes during election time rather than conducting real dialogues with citizens (Di Fraia and Missaglia, 2014; Larsson and Kalsnes, 2014).
E-Participation as integral part of e-Government	<ul style="list-style-type: none"> • A few studies address e-Participation as a central theme of discussion. Instead, e-Participation was treated as a micro subject along with other government /governance topics (e-service, openness and transparency), for example (Bertot et al., 2010a, 2012a; Mergel, 2012a; Stamati et al., 2015). However, such public policy principles does necessarily means truly participation (Bonsón et al., 2012; Gulati et al., 2014), and e-Participation should not being examined for such impact (Tambouris et al., 2013).

The results of the three dimensions of e-Participation through social media research (Figure 2 and Table 2) are explained as follow.

3.3.1 E-Participation, as an Independent Research Area, through Social Media

While social media networks enable a new dimension for e-Participation field, and might has a potential role to enhance citizen participation at different stages of the policy making process (Macintosh et al., 2009a; Medaglia, 2012; Millard, 2009; Sæbø et al., 2009; Susha and Grönlund, 2012), current research has not extended social media capacity to the e-Participation field. A search in Google Scholar in the period (2011-2017) show that, on average, only two new studies per year have focused on the use of social media into e-Participation initiatives. Compared with four new e-Participation studies has been published every month during the same period. Such findings indicate a little attention is provided by e-Participation researchers to social media (the research has been done through Google Scholar using term of “e-Participation” and “Electronic Participation” in conjunction with terms of “social media” “social network” and “web 2.0”).

As Table 2 shows that conversely to social media’s attractiveness in public sector mainly started in 2009 (Kes-Erkul and Erkul, 2009), e-Participation studies have been slow to investigate the use of social media in e-Participation context, since majority of e-Participation research within social media have been published after 2013. In sum, previous efforts to investigate e-Participation with social media did not meet expectations and there is a need for further research on social media and participation (Medaglia, 2012; Susha and Grönlund, 2012).

The findings also show that the studies which combine participation as a central theme of discussion and social media, the most important distinct characteristics of this group of studies that is it has caught e-Participation as main interest and central subject of discussion, along with social media. As well as, it has considered e-Participation as mean toward a desirable end; enhance citizens’ participation in the democratic decision making process.

In detailed, the review reveals that political issues dominated scholars' attention. Political participation activities (e.g. e-campaigns and e-voting) and politicians-citizens interactions are the focal point for investigating e-Participation through social media (Johannessen, 2010a, 2012, 2013; Johannessen and Følstad, 2014; Rustad and Sæbø, 2013; Sæbø, 2011; Wakabi and Grönlund, 2015). In practice, most e-Participation initiatives in such “political setting” have been mainly addressed by politicians which enable them to disseminate information, to promote

themselves, and to seek a potential vote-gaining during election time. It could be argued that the focus has often been on making the interactions easier and more beneficial for the politicians, not the citizens.

The review shows continuous attempts to measure and evaluate the influence of social media in political campaigns, some scholars proposed predicting instruments of future voting based on examination of candidate engagement on social media frequencies (Effing et al., 2011, 2013, 2016). Other attempts have been devoted to evaluate the use of social media in political e-Participation projects, especially in Europe (Karantzeni and G. Gouscos, 2013; Lacigova et al., 2012). In some sense, this excess interest of political issues in e-Participation researches might provide familiar arguments and nearly discuss similar ideas in e-Democracy field.

This finding seems quite surprising since e-Participation is a process that contains other actors (e.g. government institutions and citizens) as well other important activities (e.g. e-consultation and online decision making) (Sæbø et al., 2008). Although some notable exceptions, (Al-Aama, 2015; Charalabidis et al., 2014; Guttormsen and Sæbø, 2013; Norström and Hattinger, 2016; Wahid and Sæbø, 2015), it could be claimed that the emerging research field of e-Participation has still lack of research and implementation toward examine the adoption of e-Participation through social media for decision making process in government context, such results have been significant enough to merit further investigation (Guttormsen and Sæbø, 2013; Koussouris et al., 2011; Millard, 2009; Sæbø et al., 2008; Sanford and Rose, 2007; Sussha and Grönlund, 2012; Tambouris et al., 2013).

Clearly, e-Participation through social media theme still biases' around political participation activities or process. Similar to what previously found around the whole field that e-Participation research focus biases' around political process or activities as the central interest of e-Participation studies (Åström et al., 2012; Grönlund and Sussha, 2012; Sæbø et al., 2008; Sanford and Rose, 2007). Such narrow perspective of e-Participation domain interest might miss out the chance to employed e-Participation as government daily life work strategy. It should be noted that most e-Participation studies rarely capture and investigate such initiatives sponsored by government, which seems that the e-Participation field community is reluctant to move forward to the e-Government context.

3.3.2 E-Participation through Social media in Political Sphere

The review reveals that a primarily aims for using social media in e-Participation initiatives within political scope is to increase citizens engagement in political e-campaign during election time in order to increase electoral participation (Bayraktutan et al., 2014; Frame and Brachotte, 2015; Koc-Michalska et al., 2014, 2014; Larsson, 2013b; Larsson and Kalsnes, 2014; Lutz, 2009; Mergel, 2012c; Parisopoulos et al., 2012). It is clear that most studies focus on the impact e-Participation activities on voter turnouts which aims to re-engage citizens with democratic processes. Although, e-Participation might have such impact, but e-Participation for some scholars should not be looked only for that reason (Tambouris et al., 2013). The way for enhancing citizen participation in the process of decision making, not only merely through politicians' campaign or voting in election (Parlak and Sobaci, 2010).

The studies analyzed make evident that hardly efforts have been found toward open actual beneficial dialogue with citizens. Social media was mostly employed as an additional communication channel for delivering their politicians' own views and ensure their online appearance rather than conducting real conversations with citizens (Bayraktutan et al., 2014; Di Fraia and Missaglia, 2014; Frame and Brachotte, 2015, 2015; Larsson and Kalsnes, 2014; Mergel, 2012; Sandoval et al., 2012). Furthermore, the politicians have little knowledge and skills on utilizing and managing social media to support their interaction with citizens, which in many cases prevent from taken full advantage of these tools (Sandoval et al., 2012).

In some European countries national elections (e.g. Italy, Norway and Sweden), the level of use of social media by politicians declined after the election periods (Larsson and Kalsnes, 2014). Politicians candidates stopped or, at least, lost their interest in using social media to contact with their constituents after the election day (Di Fraia and Missaglia, 2014; Larsson, 2013). Since political communication differs from political participation, because participation is an activity that is intended to influence decisions (Hoffman, 2012) and citizen e-Participation should be seen as a space seeking for active citizens' involvement to influence or change the status quo, rather than only communication (Gaventa and Valderrama, 1999). In thus, we can conclude that most e-Participation initiatives through political sphere are communication initiatives rather than truly participation initiatives.

3.3.3 E-Participation through Social media in Administrative Sphere

The review indicates a few studies which address e-Participation through social media as a central theme of discussion. Instead, most studies merely discussed e-Participation along with other government/governance topics (e.g. openness, transparency, and accountability) for a general analysis, for example (Bertot et al., 2010b, 2012a; Mergel, 2012a). In general, the majority of research on e-Participation through social media is more concerning with the analysis of e-Participation through social media issues from government side (e.g. (Feeney and Welch, 2012a; Hofmann et al., 2013; Mergel, 2013a; Oliveira and Welch, 2013)) rather than to the perceptions of citizens (Charalabidis et al., 2014; Hofmann et al., 2013; Sanchez-Nielsen and Lee, 2013).

From the government side, conversely to social media's strength, governments have been slow to adopt it effectively (Bonsón et al., 2012, 2015; Larsson, 2013a; Mergel, 2012a). In fact, the adoption of these tools confronts a series of challenges mainly due to the lack of government officials social media skills to support their interaction with citizens (Guillamón et al., 2016; Mergel, 2013a; Norström and Hattinger, 2016). A survey of 850 USA government managers in 500 cities revealed a high shortage of their knowledge and experience on how social media could be designed to support their interactions with citizens (Mergel, 2013a). A similar conclusion has been reached in Swedish municipalities that there is a shortage of necessary public servants skills to use social media (Norström and Hattinger, 2016).

In practice, government using of social media for e-Participation initiatives has largely been focused on providing one-way information, improving government e-service delivery, and fostering government openness and transparency (Bertot et al., 2010b, 2010a, Bonsón et al., 2012, 2015; Bretschneider and Mergel, 2010; Chouikh et al., 2016; Feeney and Welch, 2012b; Freeman, 2013; Gulati et al., 2014; Hansen-Flaschen and Parker, 2012; Magro, 2012; Mergel, 2013a; Sanchez-Nielsen and Lee, 2013). Generally, those studies have demonstrated that social media platforms are feasible online channels (with some limitation and difficulties) for achieving such goals.

In the last few years, under the umbrella of e-Government, the most topics studied are the potential of e-Participation, specifically through social media, as a mediating platform for

supporting the underlying objectives of good governance (i.e. service delivery, openness, transparency, and accountability governance). There is no denying that e-Participation has direct relation with such public policy objectives and principles (Tambouris et al., 2013). However, that does not mean and ensure citizen participation (Gulati et al., 2014; Taylor-Smith and Lindner, 2009). Various empirical works supports this idea, that is, information provision, delivering electronic service, as well, commitment for more openness and enhancing transparency are quite different of e-Participation (Freeman, 2013; Gulati et al., 2014; Lee et al., 2011; Sæbø et al., 2011). An analysis of local governments at USA has shown that while they regularly use social media, they mainly aim to deliver information and there are limited interactivity transactions with citizens (Norris and Reddick, 2013). Similarly, an investigation of 75 European municipalities websites came to concluded that employing social media has positive forward impact for enhancing governments transparency but not e-Participation (Bonsón et al., 2012). A recent related research by (Grimmelikhuisen and Meijer, 2015) clearly indicated that the usage Twitter positively affects transparency and perceived police legitimacy, albeit to a limited extent, but not participation. Another recent study that analyzed 12,000 tweets from 10 main municipalities in Saudi Arabia (Al-Aama, 2015), the results have shown that majority of those municipalities use Twitter mainly for broadcasting information rather than for improving citizen participation. According to the author, there are limited attempts to get citizens engaged and to take an active role in government decisions.

Several previous studies have shown that governments can promote openness and transparency by using social media. But, little is known how to use it for citizen participation in decision making process (Bertot et al., 2010a, 2010b; Bonsón et al., 2012, 2015; Gulati et al., 2014; Katz and Halpern, 2013; Lestari and Moon, 2014). One reason might be due to an insufficient awareness of the fact that employing social media requires more than just a good idea (Dini et al., 2016; Lestari and Moon, 2014; Mcnutt, 2014; Wahid and Sæbø, 2015). The above discussions raise several issues relating to government ability to manage such initiatives and how to integrate social media with their mission (Mergel, 2013a) as well with their communication strategies (Guttormsen and Sæbø, 2013; Wahid and Sæbø, 2014, 2015).

In thus, citizens' participation must have an influence on the way that government do their decisions. In this sense, if government e-Participation initiatives through social media prioritize information provision, or in the best cases, have been employed as communication initiatives to

elicit citizens' feedback as the main outcome or purpose. This indicate that citizens are only seen as passive receivers of the outcome – not as active participants in the policy decision making. Such view of e-Participation raises fears of transforming e-Participation as one-side way, through deceptive procedure that do not support citizen interaction, but, on the contrary, to be done for "show", as well, for calming citizens rather than enable them to be truly influential in policy decision making (Bershadskaya et al., 2013; Macintosh and Whyte, 2008; Macintosh et al., 2009a). A high concern should be raised around collecting citizens' opinions without figure any further actions, or how will such inputs be integrated into government policy-making.

In conclusion, e-Participation through social media becoming a central component of e-Government and Open Government in a very short period of time (Bertot et al., 2010a). However, it is still not clear how successful and useful social media adoption is in the public sector. The literature shows that majority of governments use social media for e-Participation in ineffectively way. Perhaps, e-Participation through social media in government context is been understood as a mechanism for government service provision and channel for boost transparency more than a mechanism for involving citizens in decision making process. Few contributions focus specifically on the adoption and management social media in an e-Participation setting to involve citizens in government policy decision making process (Bonsón et al., 2012; Freeman, 2013; Valle-Cruz and Sandoval-Almazán, 2015).

3.3.4 Milestones of E-Participation through Social Media Research

The review of e-Participation through social media could be classified into four major milestones as follows:

- 1) **Interactions** – The politicians-citizens' interactions have dominated scholars' attention and certain political issues and activities (e.g. e-campaigns and e-voting) are the focal points of e-Participation through social media studies (Effing et al., 2013, 2016; Frame and Brachotte, 2015; Johannessen and Følstad, 2014; Parisopoulos et al., 2012; Rustad and Sæbø, 2013; Sæbø, 2011; Sandoval et al., 2012; Wakabi and Grönlund, 2015). Election results prediction is another issue that has gained researcher attention (Johannessen and Følstad, 2014). The review shows continuous attempts to evaluate the influence of social media in political campaigns, some scholars propose predicting instruments of future voting based

on examination of candidate engagement on social media frequencies (Effing et al., 2013, 2016). Considering these results, e-Participation studies through social media seem biased around political processes, similar to research in the whole field (Avdic et al., 2007; Sanford and Rose, 2007; Sussha and Grönlund, 2012).

- 2) **Aim** – In practice, the mainstream of e-Participation through social media initiatives was performed to reinforce politicians' position rather than to conduct dialogue with citizens (Sæbø, 2011). Politicians actually use social media platforms as a venue to express themselves, spread their information, and announce their activities in order to raise their image and to gain more constituent votes during election time (Frame and Brachotte, 2015; Johannessen, 2014; Sæbø, 2011; Sandoval et al., 2012). This implementation reflects a significant gap between the promise (what politicians' state) and how they actually behave (what they really do). Politicians state that they use e-Participation through social media for engaging in dialogue with citizens, meanwhile they actually poste statements (Sæbø, 2011). For some, this indicates a failure to understand that e-Participation, likewise social media, goes far beyond offering additional opportunities to disseminate information for only election purposes (Parisopoulos et al., 2012).

Politicians use for e-Participation through social media has largely been presented a propagandist nature with their constituents, mainly addressed disseminating of information, promotion themselves, and seeking for potential vote-gaining during election time. Hence, in reality its present communication, rather than participation. The current study in line with (Parlak and Sobaci, 2010; Sobaci and Karkin, 2013) that the way for enhancing citizen participation in the process of decision making, not only merely through politicians' campaign or voting in election. Equally, government have intensively employed such initiatives through limited two-way communication structures for information provision that focus on service delivery, openness and transparency. Hence, such applications are not by necessary mean and ensure citizen participation.

- 3) **Integration** – More recently efforts have been made towards supporting government's e-Participation initiatives that aim at improving citizen's participation in government policy making processes (Charalabidis et al., 2014; Guttormsen and Sæbø, 2013; Panagiotopoulos et al., 2014; Wahid and Sæbø, 2015). However, they are still few of such

efforts, comparing with the increasing of e-Participation research over the last few years. An analyses of e-Participation reveal a lack of integration of e-Participation through social media strategy into government institutions' works, communication strategies, and the decision-making processes (Dalakiouridou et al., 2012; Guttormsen and Sæbø, 2013; Panagiotopoulos et al., 2014; Wahid and Sæbø, 2015). Without such integration and formalize social media into decision-making processes, citizens are less likely to participate (Johannessen et al., 2016). Thus, social media strategy into government e-Participation initiatives is needed (Berntzen and Johannessen, 2016; Bertot et al., 2012a; Guillamón et al., 2016; Johannessen et al., 2016; Mainka et al., 2014; Mergel, 2012a). However, current e-Participation research has little information of how e-Participation forms can be integrated with social media tools services for policy decision making process (since social media offers online discussion platform, chat and online surveys and polls possibilities).

- 4) **The Lack of Citizen Perspective** – Using social media in an effective way requires more than simply creating an account to have a social media presence (Mainka et al., 2014; Yi et al., 2013). Instead, many important factors should carefully be considered and to be significantly explored. For instance addressing citizens' needs rather than just to increase the number of followers (Khan et al., 2014; Rustad and Sæbø, 2013), reflecting citizen's feedback through social media in governmental change (Bertot et al., 2010b; Larsson, 2013a; Mergel, 2013a; Wahid and Sæbø, 2015), and exploring citizens' motivations, needs, requirements, and expectations to participate. In thus, citizens' perspective toward such interaction requires a deeper understanding and study from researchers (Sæbø, 2011; Sæbø et al., 2009; Sanchez-Nielsen and Lee, 2013; Sandoval-Almazan and Gil-Garcia, 2012).
- 5) **Limited Citizens' Participation** – Clearly, citizens' engagement in e-Participation initiatives through social media is not as anticipated, particularly those initiatives sponsored by government institutions. The literature review conducted in this study emphasize that the implementation of e-Participation initiatives seems to be less successful and objectively hard to achieve and one major reason behind is a less citizen-centric approach.

Opinions vary widely about the reasons behind limited citizens' participation. From one hand, several studies found that e-Participation initiatives linked to social media are inclusive

to those who are already politically interested, rather than attracting and encouraging inactive citizens (Panagiotopoulos et al., 2011; Wakabi and Grönlund, 2015).

In related studies, where social media are used to mobilize citizens, and then directing them to the "official" websites of e-Participation (Berntzen and Johannessen, 2016), e-Participation activities that linked to social media, did not ended in "official" e-Participation websites. Khan et al (2014) examined Twitter use by use by Korea's central government and found that despite an extensive use of Twitter in government daily interactions with citizens, the government social media strategy did not motivate the public to participate in government e-Participation activities (Khan et al., 2014). In result, increasing social media participation rarely had significant impact on promoting official e-Participation initiatives (Bicking et al., 2011; Effing et al., 2011; Hong and Nadler, 2012; Panagiotopoulos et al., 2011; Pruulmann-Vengerfeldt et al., 2011; Štětka et al., 2014; Wakabi and Grönlund, 2015).

From another hand, other studies claim that as long as e-Participation initiatives are being implemented through poorly and outdated management policies and procedures – which earlier fails to touch citizen's needs and requirements (Bertot et al., 2010a, 2012a; Mergel, 2012a). Accordingly, just offered social media interaction by policy makers, it doesn't necessarily mean that they would easily attract citizens, and attain their greatly involvement (Bertot et al., 2010a; Johannessen and Følstad, 2014; Larsson, 2013b; Mergel, 2013b; Sæbø, 2011; Sandoval et al., 2012; Wahid and Sæbø, 2015; Welch and Feeney, 2014). Rationally, the weak impact of citizens inputs and feedback provided through social media on government decisions hamper citizens' participation (Johannessen et al., 2016). The studies analyzed make evident that many of such initiatives are being performed under the absence of real policy makers commitment and believes (Bertot et al., 2010b; Feeney and Welch, 2012a; Johannessen and Følstad, 2014; Larsson, 2013a; Mergel, 2013a; Oliveira and Welch, 2013; Wahid and Sæbø, 2015).

Even the truth is probably a mixture of the both views. It comes as a surprise; it remains unclear if citizens are willing to accept and use this new and rapid interaction. According to Effing et al. (2013), user acceptance and readiness for e-Participation initiatives need to be properly understood before investigating its effects. Thus, it is important to examine factors

influence citizens' acceptance for deepen the understanding on why citizen participation through social media is not increasing as expected.

3.4 Citizens Acceptance Factors Toward e-Participation Initiatives

As we frequently stated in previous chapters, there is few e-Participation research regarded citizens' acceptance of e-Participation initiatives, particularly those implemented through social media. So, before we get further involved in identifying such acceptance factors for e-Participation context, it is worth briefly start with referring to citizens acceptance and adoption factors in e-Government context, as a topic that has been extensively investigated in e-Government literatures (Bannister and Grönlund, 2017; Gupta et al., 2016; Hofmann et al., 2012; Rana et al., 2013; Titah and Barki, 2006, 2008; Wirtz and Daiser, 2016). Clearly, those literatures will be good added to enhance the understanding of citizens' acceptance and adoption in another closely context as e-Government. However, e-Government studies mostly related to citizens' acceptance and adoption factors to support and enable the adoption and implementation of e-Government services and applications, which probably differ from e-Participation activities. So, it may be difficult to consider any factors validated through previous e-Government researches to explain e-Participation phenomenon unless they appear relatively suitable and could be adapted to fit with e-Participation context. But this is not that easy because the needs of each context vary from one to another (Hofmann et al., 2012).

3.4.1 Citizens Acceptance Factors in E-Government Context

During the last decade, citizens' perception towards e-Government adoption and acceptance topic has been extensively investigated in the literature. The majority of those literature mainly utilizes various technology adoption models and theories, particularly Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) models (Bannister and Grönlund, 2017; Gupta et al., 2016; Hofmann et al., 2012; Rana et al., 2013; Titah and Barki, 2006), based on the argument that the success of e-Government depends upon the citizen's willingness to adopt this innovation (Carter and Bélanger, 2005). A recent study of Wirtz and Daiser (2016) reinforces that high interest. After reviewing

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129 quantitative empirical e-Government studies (from 2002-2016), they identified that 33 studies deal with citizens' acceptance, use and/or satisfaction, and 39 deal with adoption/driver-related topics. An earlier study by Titah and Barki (2008) has also identified 99 articles, published between January 1990 and February 2007, on e-Government adoption and acceptance. According to the study, perceived usefulness, perceived security and privacy, accessibility and usability, trust, and top government management/political support were the most significant antecedents of citizen' acceptance and adoption of e-Government (Titah and Barki, 2008). Furthermore, Kumar et al. (2007) propose a conceptual model of e-Government adoption. The authors suggest that e-Government adoption is affected by three main constructs; 1) government website design (subsume Perceived Ease of Use (PEOU) and Perceived Usefulness (PU)); 2) user characteristics (sense of perceived risk, feeling of perceived control and prior Internet experience); and 3) citizen satisfaction which is determined by the quality of government services (Kumar et al., 2007).

Recently, Hofmann et al. (2012) conducted a meta-analysis literature review on the acceptance and adoption factors of e-Government in the period between January 2000 and September 2011 (Hofmann et al., 2012). The researchers selected 22 relevant studies in 20 top ranked IS and e-Government journals and identified 91 variables that significantly influence citizens' intention to use e-Government services. The majority of those factors has been classified into four major categories; 1) technology characteristics; 2) environmental characteristics; 3) government e-service characteristics; and 4) user characteristics.

Technology characteristics refers to the user's perception of the use of technology. In this category, two prominent constructs of TAM (Davis, 1989) – PEOU and PU – are the most significant frequently factors used. PEOU (respectively “effort expectancy” as used in UTAUT) and PU (respectively “performance expectancy” as used in UTAUT (Venkatesh et al., 2003)). COMP, as one of roger's Diffusion of Innovation (DOI) model construct (Rogers, 1995), is another significant antecedent for the intention to use an e-Government service. The most significant factor identified within the category of environmental characteristics (which concerns with external influences) is facilitating conditions. Four factors of government e-service characteristics that have shown to have a significant influence in citizen's acceptance are: level of satisfaction with government website, information quality (or information accuracy) provided on the website, privacy, and mobility. Finally, in terms of user characteristics, self-efficacy, user's experience and

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skills as well as trust, which comprises both trust in government and trust in the technology, have been identified as the most significant factor in such category.

Given more focus on e-Government studies in Jordan, several attempts have explored the factors that influence Jordanian citizens' acceptance and adoption of e-Government services. While some studies (Alomari, 2014; Alryalat et al., 2013a) use an established e-Government adoption model and a theoretical framework consisting of, for example, TAM, UTAUT, and DOI. Other studies as (Al Hujran et al., 2013; Al-Hujran et al., 2015; Alomari et al., 2012; Alryalat et al., 2013b) use a combination of previous models factors along with a massive set of factors assimilated from wide range of literature. Those factors are, but not limited to, citizens' trust (includes trust in the government and trust in the internet), beliefs, privacy and security, website design, internet and computer skill confidence, government e-service quality and citizen satisfaction. There are no major contrasting results among those studies. Most of them have indicated that citizens' attitude, trust in government, ease of use (or effort expectancy as depicted in UTAUT and complexity in DOI), perceived usefulness (or performance expectancy as depicted in UTAUT and as relative advantages in DOI), citizens' satisfaction, website design, social influence, and beliefs were significant factors in Jordanian citizens' intention to use e-Government services.

The above identified factors from e-Government, as "neighboring" field to e-Participation, will be good added to enrich the understanding of citizen's acceptance topic and to support the development of the study model. However, the impressive number of identified factors would make building the model much more difficult. Clearly, not all these factors are suitable for the current thesis. Therefore, it has to be kept in mind that factors which have turned out to be significant for one context might not be significant for another context and vice versa (Hofmann et al., 2012). Thus, the study point of view of determining relevant factor is based on the belief that the ultimate objective of e-Participation initiatives ought to be the frequent and recurring use of ICT (for the thesis is social media, specifically Facebook) by citizens not only for obtaining information and enhancing the quality of government e-service, but also towards further citizens' interacting to create real participation in government policy making process.

For helping us in identifying which of the aforementioned factors are relevant for this thesis, two major distinctions between e-Participation and e-Government may be considered.

3.4 Citizens Acceptance Factors Toward e-Participation Initiatives

First, a major distinction between e-Participation and e-Government is that the use of e-Participation almost by nature – has to be voluntary for citizens, rather than mandatory. The use of e-Participation is a voluntary action of citizens who can decide either to get involved or not (Axelsson et al., 2010; Coleman et al., 2008; Edelman and Cruickshank, 2012; Macintosh and Whyte, 2008; OECD, 2009; Sæbø et al., 2008). For instance, it is entirely optional for the citizen to involve on e-Participation activities such as e-petition (Cruickshank and Smith, 2011) and e-voting systems (Yao and Murphy, 2007). In contrast, e-government channels and services become no longer voluntary actions for citizens. During the past years, some countries, such as Denmark (Madsen and Kræmmergaard, 2015) and Hong Kong (Chan et al., 2010), adopted e-government strategy based on making e-government services mandatory for citizens. Such strategies aim to reduce the use of traditional channels for providing government services. In this way, citizens have no choices and then they are forced to use e-government services, despite they want or able to do.

Second, e-Government studies still focus on e-Participation as activities restricted to improve the quality (design and delivery) of government e-services, rather than activities that aim to engage citizens in government policy making processes (Alarabiat and Soares, 2016; Alarabiat et al., 2016b). Few significant attempts could be found that created a clear differentiate between e-Participation and other e-Government services, such as studies of (Feeney and Welch, 2012b; Hofmann et al., 2013; Oliveira and Welch, 2013; Sæbø et al., 2011). Axelsson et al. (2010) is one of a notable example when the authors explicitly declare that that the term of e-Participation is much broader spectrum of citizen participation in government e-service development (Axelsson et al., 2010).

Thus, we devoted coordinated efforts to consider such distinction between e-Participation and e-Government to discern relevant factors that might affect citizens' acceptance towards e-Participation initiatives. It should be noted that in social media government research, citizens' acceptance and intention behavior toward interaction with government through social media remains limited (Medaglia and Zheng, 2016).

Next section mainly focuses on the most related work studying the issue of limited citizens' participation (from e-Participation context) to identify relevant factors that may influence citizens' attention to accept and to engage in e-Participation initiatives.

3.4.2 Citizens Acceptance Factors in E-Participation Context

Several previous studies demonstrate that the success of e-Participation could not be attained only through providing technical tools (Sanchez-Nielsen and Lee, 2013; Sussha and Grönlund, 2014), and that the solely availability of various e-Participation tools does not necessarily guarantees citizens' interest and engagement in such initiatives (Macintosh and Whyte, 2008; Macintosh et al., 2009a; Mustafa Kamal, 2009; Sæbø et al., 2008; Sussha and Grönlund, 2014). Probably, there are other determinant factors that influence citizens' participation (Edelmann and Cruickshank, 2012; Macintosh et al., 2009a). In this sense, more concern should be put around what is beyond the development and offering of e-Participation tools (Boudjelida et al., 2016; Mustafa Kamal, 2009). In fact, citizens' personal and social acceptance to be involved in e-Participation activities appear as crucial factors (Cruickshank and Smith, 2011; Edelmann and Cruickshank, 2012; Macintosh and Whyte, 2008; Mustafa Kamal, 2009). According to those studies, psychological factors, defined as beliefs and attitudes, and sociological factors such as social support (or constraints) and social acceptance (or resistance) should be considered, understood, and measured.

There is some evidence that choosing easy to use and suitable e-Participation tools has a potential positive impact on gain more citizens engagement (Johannessen, 2010b; Johannessen et al., 2012), in thus, the availability of sophisticated e-Participation tools, which demands high technical skills from citizens significantly reduces citizens ability and willingness to participate (Abu-Shanab and Al-Dalou, 2016; Lacigova et al., 2012; Medaglia, 2012; Prieto-Martin et al., 2012; Sussha and Grönlund, 2014). Therefore, looking for greater citizens participation requires providing those citizens with technological tools that they can use and want to use (Macintosh et al., 2009b). This agrees with the recent review conducted by Boudjelida et al. (2016). These authors have declared that the e-Participation tools that are used to achieve e-Participation initiatives objectives might be inappropriate, unfamiliar, or simply unknown to the citizens. Another evidence is that the use of weak communication means to reach and to interact with citizens in e-Participation projects also reduces citizens ability and willingness to participate (Lacigova et al., 2012; Prieto-Martín et al., 2012). One of the main challenges of the e-Participation is to choose and provide an effective mediating technology between citizens and governments (Boudjelida et al., 2016; Macintosh and Whyte, 2008). Researches indicated that

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a well-designed e-Participation website can enhance citizen's intention to engage in e-Participation activities (Alharbi et al., 2016; Ali et al., 2015; Alomari, 2016; Al-Quraan and Abu-Shanab, 2015). Perhaps, policy makers, governments in particular, are in urgent need to use or adapt more dynamic tools and more interaction digital space in response to citizens' particular preferences, specially social media tools (Boudjelida et al., 2016; Charalabidis et al., 2014; Dini et al., 2016; Karantzeni and G. Gouscos, 2013; Kes-Erkul and Erkul, 2009; Mergel, 2013a; Sæbø et al., 2009). It should be noted that some studies highlighted the importance of citizens technology or internet knowledge and skills as one of the success factors of e-Participation initiatives (Abu-Shanab and Al-Dalou, 2016; Lee and Kim, 2014).

However, technological factors were not the only barriers. Other non-technical factors – e.g. social, political, behavior, and cultural – may have a significant impact on citizens' engagement (Alathur et al., 2016; Edelman and Cruickshank, 2012; Freschi et al., 2009; Macintosh and Whyte, 2008). For instance, citizens' interest on participation (Sæbø et al., 2009), citizens' political efficacy, freedom to participate (Alathur et al., 2016; Berntzen and Karamagioli, 2010), and citizens' awareness and interest in policy issues (Freschi et al., 2009) have a significant effect on citizen participation. Some authors highlight the role of citizens' ability, attitudes and social acceptability determinants as influencers of their decision to participate (Cruickshank and Smith, 2009; Macintosh and Whyte, 2008; Susa and Grönlund, 2012). Others stress the role of citizens trust in government as an influence factor for adopting and actively be involved in government e-Participation initiatives (Freschi et al., 2009; Sanchez-Nielsen and Lee, 2013; Scherer and Wimmer, 2014).

Another important factor that may cause limited citizens engagement is the lack of commitment exhibited by many government officials to open truly deliberation to citizens (Bertot et al., 2010a; Johannessen et al., 2016; Macintosh et al., 2009a; Panopoulou et al., 2010; Sanchez-Nielsen and Lee, 2013). In fact, many citizens' opinions, views, and feedback are been rarely considered in final government decisions (Mergel, 2013b; Wahid and Sæbø, 2014). If the governments are not willing or committed to change their decision making process to motivate citizens for more participation, citizen's will be suspicious that e-Participation initiatives might lead to nothing (Panopoulou et al., 2010). Rationally, citizens perceive that the benefits of their interaction with government through e-Participation initiatives are positively associated with the acceptance of such interaction. Thus, citizens may decide to get involved in e-Participation based

3.4 Citizens Acceptance Factors Toward e-Participation Initiatives

on whether or not they believe their input has any influence on government policies and decisions (Johannessen et al., 2016; Macintosh and Whyte, 2008; Macintosh et al., 2009a; Medaglia, 2012; Mergel, 2013b; Wahid and Sæbø, 2014). Therefore, it is logical to expect growing citizens' willingness to voluntarily participate when they believe that their participation will make a difference and will have an impact on government decisions (Axelsson et al., 2010).

In the context of Jordan, Al-Hujran et al. (2014) examined the factors that influenced e-Participation use. The study measured Jordanian citizens' attitude towards e-Democracy tools on e-Government websites by using an integrative model based on TPB and TAM. The results show that ATT, SN, and PBC have significant effect on the intention to use e-Participation tools available on e-Government websites. The authors referred to e-Participation tools as e-Democracy tools. One issue with the methodology used in this study, similar to the majority of e-government research in Jordan, is that it confined its sampling to undergraduate students, which may have possibly skewed the results of the study.

A closer look at social media for e-Participation literature reveals that while many studies have examined the use of social media in the government context, they have not investigated their use specifically for e-Participation purposes (Alarabiat and Soares, 2016; Alarabiat et al., 2016b; Dini and Øystein, 2016; Feeney and Welch, 2012a; Hofmann et al., 2013; Oliveira and Welch, 2013). Despite the fact that social media is changing general expectations surrounding the interactions with government, previous research works focus on the influence of using social media on government openness, transparency, and improved service delivery but not on e-Participation (Bonsón et al., 2015; Mossberger et al., 2013). Those studies conclude that the most government initiatives largely prioritize the dissemination of information on the government's operations over reciprocal discussions with citizens through social media platforms – very few initiatives use such platforms for interacting with citizens. For example, the use of social media in the 75 largest USA cities between 2009 and 2011 were more concerned with dissemination of information rather than with improving citizen participation (Mossberger et al., 2013). Similar results were also found in European cities (Bonsón et al., 2015) and Saudi's Arabia municipalities (Al-Aama, 2015). The results of Al-Aama (2015), which recent analyzed 12,000 tweets from 10 main municipalities in Saudi Arabia, have shown that the most of those municipalities use Twitter mainly for broadcasting information rather than for inviting citizens to

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participate. According to the author, there are limited attempts to get citizens engaged and to take an active role in government decisions.

Generally, the majority of research on e-Participation through social media have devoted great focus on government institutions perspective (Bonsón et al., 2015; Mergel, 2013b; Mossberger et al., 2013; Oliveira and Welch, 2013). Some studies follow in depth case studies (Mossberger et al., 2013), content analysis (Bonsón et al., 2015) and few have applied theoretical approach such as (Oliveira and Welch, 2013). However, realizing a high level of success in e-Participation through social media success in terms of attracting more citizens and enhancing their engagement in such initiatives might require first social and technology acceptance, willingness, and readiness of the citizens for that interaction (Bertot et al., 2010a).

Grounded on the above most relevant studies, this section identified eight factors that expected to have effect on citizens' intention to engage in e-Participation initiatives through Facebook. These factors are: Perceived Value of citizen's involvement in e-Participation initiatives (PV), Participation Efficacy (PE), Perceived Ease of Use of Facebook (PEOU), Perceived Usefulness of Facebook (PU), Compatibility of Facebook (COMP), Citizen Trust in Facebook (CT_FB), Citizen Trust in Government (CT_GOV), and Facilitating Conditions (FC).

3.5 Literature Review Summary

The discussions presented in chapter 3 clearly evidence the dynamicity and vitality of the e-Participation field, which has become one of the most flowering topics in public sphere. However, it shows the research to date on e-Participation have been excessively biased towards political aspects. Majority of research typically concern efficiency of political activities as the central interest of e-Participation system.

The literature review identified that e-Participation initiatives and projects, except in few cases, still face the problem of a citizens' low-level acceptance and adoption. Such findings show that making e-Participation tools available for citizens, and providing them with an access for directly influence government policy-making process, does not necessarily mean that citizens will get involved and participate. The current thesis asserts that e-Participation effectiveness is not

only about the tool, but it is about the people who will use the tool and the reasons they are using it for.

Despite the notion of e-Participation through social media has proliferated significantly day by day. However, most of works searched this phenomenon are as underling topic into political and government areas, not into e-Participation as an independent area. Many studies merely mentioned e-Participation along with other political and government/governance topics for a general coverage. The review indicates that e-Participation through social media offers indeed new opportunities for government to enhance their engagement in formulating government decisions, but the desirable participation level is mainly and firstly conditioned by citizen acceptance of such participation. Considering this, an analysis of citizens' acceptance could be one pathway to clarify the low level of citizens' participation.

Currently, citizen acceptance and adoption factors is a scant topic in e-Participation research, and the key factors that could explain and predict citizens' participation are not yet thoroughly identified. Overall, the literature on citizens' acceptance of e-Participation (particularly through social media) appears fragmented and is devoid of attempts for developing acceptance framework or model. Therefore, this chapter filling in the need for an integrative model that identifies the appropriate nature of relationships among the key drivers of acceptance. The chapter identified the initial factors that might be related to citizens' acceptance or intention to engage in e-Participation initiatives. Those factors are; PV, PE, PEOU, PU, COMP, CT_FB, CT_GOV, and FC.

Next chapter Study Design discusses the research design and specified methodology to be followed in this study. Next chapter shows how to investigate citizens' intention to engage in government-led e-Participation initiatives through Facebook, and how the current study avoided identified criticisms of e-Participation through social media research theme.

4 . CHAPTER FOUR: STUDY DESIGN

4.1 Introduction

This chapter introduces the study design and is organized as follows. Section 4.2 presents TPB as the selected theory that guides the current study. Section 4.3 explains the study model construction process. Section 4.4 specifies the expected relationships among the model constructs and proposes plausible hypotheses. Section 4.5 introduces the methodology used – quantitative approach. Section 4.6 establishes rigor aspects of the study measurement: reliability and validity. Section 4.7 explains the study survey questionnaire process. Section 4.8 describes the study context. Finally, Section 4.9 summarizes the chapter.

Figure 3 shows the overall study design steps and how they are connected to next chapters.

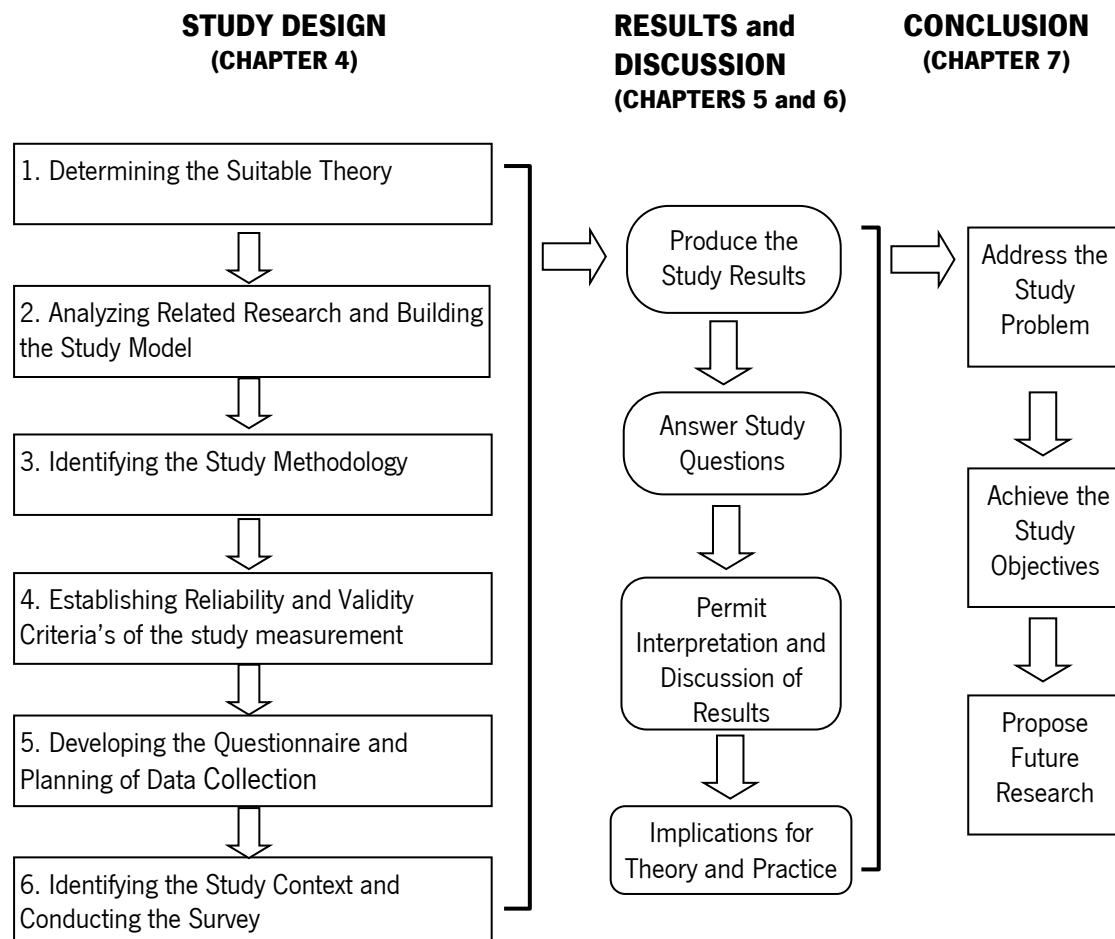


Figure 3. The Overall Study Design Steps and its Related to Next Chapters

4.2 Theory of Planned Behavior

TPB is a social-psychological theory that attempts to predict and understand why a person may perform (or not perform) certain behaviors (Ajzen, 1991). Specifically, the theory states, as shown in Figure 4, that a person's actual behavior can be predicted by his/her intention to perform that behavior. Simultaneously, behavior intention is preceded by three constructs: person's attitude, subjective norms, and perceived behavior control (Ajzen, 1991). TPB is based on a major assumption that the person is rational, and that rationality enables and empowers him/her to make conscious reasoned choices. Those behavioral choices are mainly shaped by that person's cognitive thinking and surrounded by social pressures within certain boundary of behavior control constraints (Ajzen, 1991; Bhattacharjee, 2012).

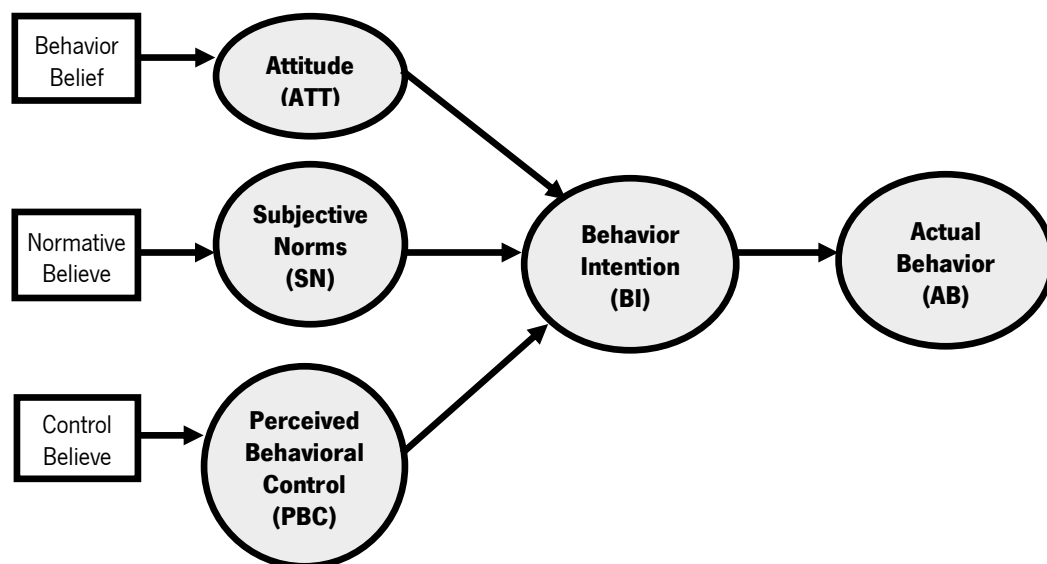


Figure 4. Theory of Planned Behavior (Ajzen, 1991, 2006)

In details, TPB presumes that a person's intention to perform a behavior (BI) can be a strong predictor of his/her actual behavior (AB). BI can be understood as the degree that a person is willing to try or perform a certain behavior, and is determined by three conceptually independent determinants: ATT, SN, and PBC.

ATT refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen, 1991; Fishbein and Ajzen, 1975; Taylor and Todd,

1995), which can be traced and assessed back to an individual's behavioral beliefs regarding the different consequences of that behavior. Behavioral belief reflects an individual expectation and evaluations of the outcomes of the behavior (Ajzen, 2006). SN presents a social factor in the theory, which refers to the degree of perceived social pressure to perform or not to perform a certain behavior. SN is weighted as the person's perception that others, who are important to him/her (such as family, peers, friends, colleagues, supervisors and managers at work, or whole society), have about if he/she should (or not) perform the intended behavior (Fishbein and Ajzen, 1975). Finally, PBC captures the extent to which a person has control over engaging in the behavior, and refers to the perceived ease or difficulty of completing or performing the behavior (Ajzen, 1991, 2006). According to the theory, PBC is determined by control beliefs, which is about the presence of internal and external factors that may facilitate or impede the performance of the behavior (Ajzen, 2006). Internal controls include the person's self-efficacy (SE), which refers to person's confidence in his/her ability to perform the behavior in question. External controls include facilitating conditions (FC), which refers to the availability of external resources needed to perform that behavior or make performance of the behavior easily (e.g., the person's perception that he/she possesses the necessary skills, time, resources or opportunities to successfully perform the behavior). If the FC (external factors environment) does not permit the behavior, the individual cannot perform the behavior. As a general rule, when a person has positive attitudes and perceives positive opinions from others with greater self-ability of completing the behavior, the person is more disposed to perform a certain behavior.

Researchers should have reasonable validations behind their selection of a specific theory (Gregor, 2006; Hong and Tam, 2006), mainly through rigorous justifications of why and how the selected theory fits in the context in which it is applied, and how it would be tied to the specific needs and aims of the research (Bhattacharjee, 2012; Hofmann et al., 2012; Saunders et al., 2011; Zikmund et al., 2013). This is especially relevant in e-Participation context, where the majority of research works are widely criticized due to the lack of clear explanations of how the used theories were selected (Dini and Øystein, 2016; Macintosh et al., 2009a; Sæbø et al., 2008). Hence, TPB is considered a steering theoretical framework for the current study for the following reasons:

- 1) **TPB capacity to explain acceptance.** TPB has been used and validated as a well-researched model for various topics in several contexts. For instance, citizen

acceptance of e-Government services (Ozkan and Kanat, 2011) and of mobile government services (Hung et al., 2013), and social media continuous usage (Al-Debei et al., 2013; Chen et al., 2012). Such studies have proved that user acceptance (represented by intention to use) can be appropriately explained by TPB. In e-Participation context, intention to use was found as a good predictor of citizens' decision to use e-Petition (Cruickshank and Smith, 2011) and e-voting systems (Yao and Murphy, 2007).

- 2) **Voluntary behavior.** TPB supposes that ATT, SN, and PBC are more predictable of BI when the behavior in question is under person's voluntary control (Ajzen, 2006). DeLone and McLean agree and support that the intention to use may be a more acceptable variable in the context of voluntary usage (DeLone and McLean, 2003). As we mentioned earlier in Sections 2.4 and 2.7, the nature of e-Participation context meets this requirement quite well, since e-Participation, through social media in particular, is a full voluntary action for citizens who can decide to participate or not. By nature, e-Participation is a voluntary activity of citizens who can freely and easily decide to engage in such initiatives or not (Axelsson et al., 2010; Coleman et al., 2008; Cruickshank and Smith, 2011; Edelman and Cruickshank, 2012; Macintosh and Whyte, 2008; OECD, 2009; Sæbø et al., 2008).
- 3) **TPB extension and integration flexibility.** The theory provides an effective and flexible conceptual framework to be complemented by external constructs to serve specific contexts (Ajzen, 1991, 2006; Chu et al., 2004; Taylor and Todd, 1995). The salient belief constructs of TPB (behavioral, normative, and control beliefs) allow researchers to uncover more external factors that might impact that intention (Ajzen, 2006; Armitage and Conner, 2001; Taylor and Todd, 1995). Hence, it is open to be supplemented/evolved by other factors to provide better explanatory power (Ajzen, 1991; Taylor and Todd, 1995), without the fear of demolishing the theoretical plausibility of the theory model (Hung et al., 2013; Ozkan and Kanat, 2011).
- 4) **Returning to the theoretical roots of technology acceptance models.** The Technology Acceptance Model (TAM) (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) dominate

theoretical basis of the most IS and e-Government studies related to investigating citizens (users) acceptance and adoption of technology (Bannister and Grönlund, 2017; Gupta et al., 2016; Hofmann et al., 2012; Ozkan and Kanat, 2011; Rana et al., 2013). For some scholars, such extensive use have diverted more researchers efforts away from exploring other important research factors related to user acceptance (Benbasat and Barki, 2007; Hofmann et al., 2012). That raises further suggestions for developing alternative models which are tied to the specific needs of a research instead of only stick to those models (Straub, 2009). Some researchers call for returning to the theoretical roots of those models and using for instance TPB instead of TAM (Benbasat and Barki, 2007).

Despite of being considered a useful theory for predicting behavior intentions (Armitage and Conner, 2001; Bhattacharjee, 2012; Davis, 1989; Taylor and Todd, 1995; Venkatesh et al., 2003), TPB has, according to Armitage and Conner (2001), some limited predictive ability as it explains 39% and 27% of the variation in BI and in AB constructs, respectively. Many researchers have responded to such criticism by incorporating additional variables to the basic model of the theory, in an effort to produce more satisfactory explanations, likewise to fulfill and serve their research needs (see for example (Al-Debei et al., 2013; Chu et al., 2004; Hung et al., 2013)). A pioneer attempt has been proposed in 1995 by Taylor and Todd (1995). These authors extended the main constructs of the theory (ATT, SN, and PBC) by decomposing them into indirect measures. Their model proposed that PU, PEOU, and COMP comprise ATT; and FC comprise PBC. Accordingly, better explanatory power has been reached: 55.36% of the variation in BI and 39.80% of the variation in AB.

Next section precisely explains the development of the study model.

4.3 Study Model Development

This section fulfills the second objective of the thesis—building and deriving a theoretical model for scoping citizen's acceptance in e-Participation contexts. As previously mentioned, the prospected model of the study underscores the fact that citizens' wants and preferences need

to be properly understood, along with other factors that generate acceptance, before developing an effective e-Participation adoption strategy.

To predict citizens' intentions towards involvement in e-Participation through social media initiatives, it is reasonable to consider several factors associated with citizens' active participation. We consider such factors based on the literature review discussed in Section 3.4. The selected factors are: PV, PE, PEOU, PU, COMP, CT_FB, CT_GOV, and FC along with TPB constructs. Clearly, by selecting such factors to be integrated with TPB constructs, we aim to create a balanced model that combines various perspectives: ATT represents the psychological perspective, SN represents the social perspective, PEOU, PU, and COMP represents the technological characteristics, PE, CT_FB, and CT_GOV represent the user characteristics, PBC and FC represent the environmental characteristics, and PV represents the expected benefits of citizens' involvement in e-Participation initiatives.

Figure 5 shows the relationship between the constructs of the study model. The proposed model, which postulates on the basis of the TPB main constructs (BI, ATT, SN, and PBC), was **first** extended with two major constructs: PV and PE that expected to have an impact on BI. **Second**, we identify five relevant constructs that precede and influence ATT and PV constructs: PEOU, PU, COMP, CT_FB, and CT_GOV. PEOU, PU, and COMP constructs reflects the features of Facebook as a mean, platform, and intermediary technology, or as IS artefact that may foster citizens' involvement in e-Participation activities and the enhancement of their interaction with government (Dini and Øystein, 2016; Johannessen and Munkvold, 2012). Those technological features was derived and adapted from (Davis, 1989; Rogers, 1995; Taylor and Todd, 1995), as well as from various e-Government acceptance studies, as previously mentioned in Section 3.4. **Third**, we identify one construct that we expect to affect the PBC construct, namely FC. The construct reflects environmental or external influences, and thus, it includes freedom to participate and citizens' confidence in government ability and commitment to operate such initiatives.

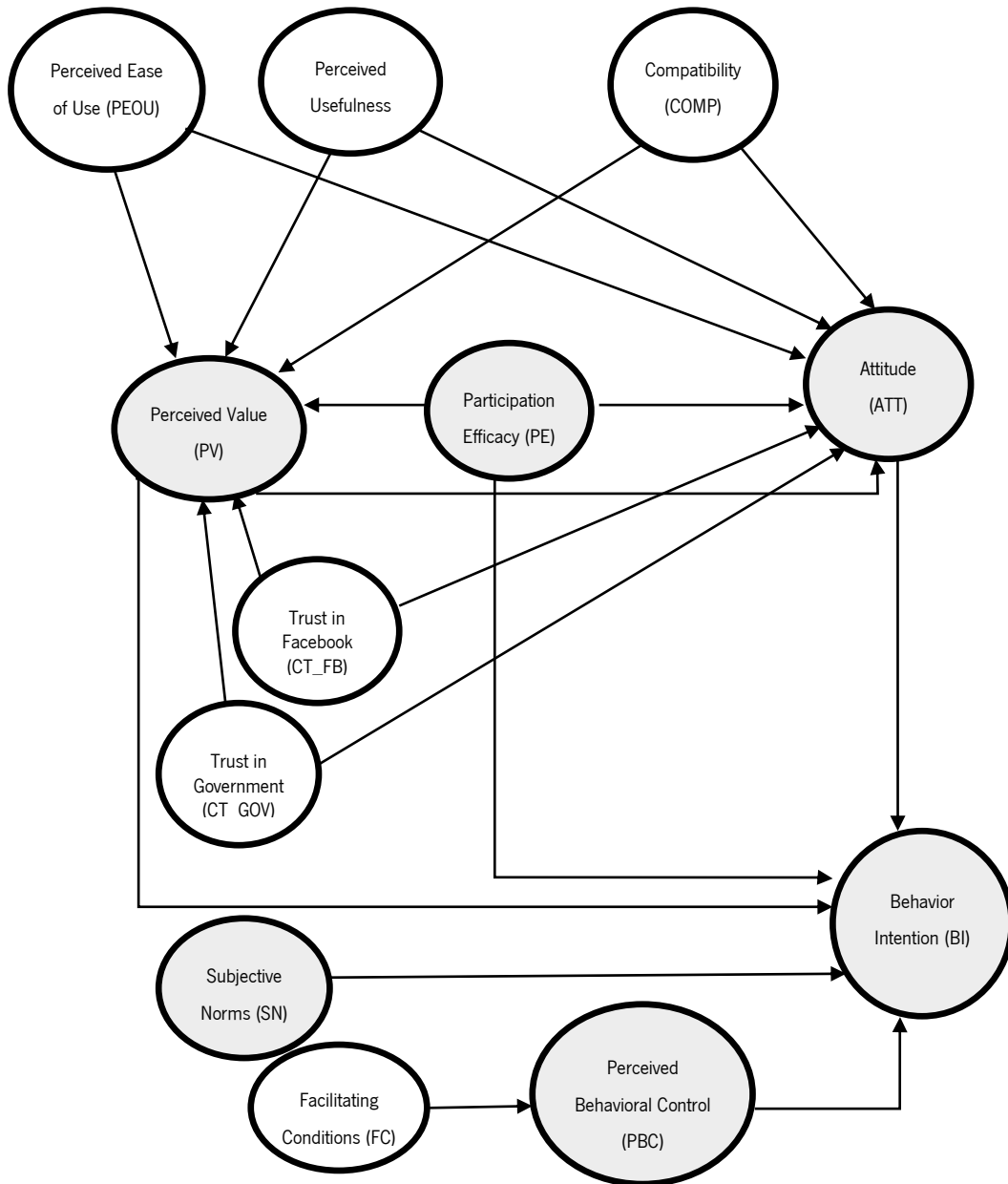


Figure 5. The Proposed Model

Table 3 shows the constructs used in the proposed model including their origin and reference from literature and Table 4 provides the definitions of the core constructs and its related internal factors used in the proposed model. Each construct and its relationships with other constructs precisely formulate the study hypotheses, as depicted in the model, and are discussed further in Section 4.4.

Table 3. Constructs of Proposed Model

ID	DESCRIPTION	ORIGIN	REFERENCES
BI	Behaviour intention (intention to participate)	TPB	(Ajzen, 1991; Taylor and Todd, 1995)
ATT	Attitude towards Act or Behaviour	TPB	(Ajzen, 1991; Fishbein and Ajzen, 1975; Taylor and Todd, 1995)
SN	Subjective Norms	TPB	(Ajzen, 1991; Fishbein and Ajzen, 1975; Taylor and Todd, 1995)
PBC	Perceived Behavioural Control	TPB	(Ajzen, 1991; Taylor and Todd, 1995)
PV	Perceived Value	Extended construct	(Al-Hujran et al., 2015; Panopoulou et al., 2014; Wang, 2014)
PE	Participation Efficacy	Extended construct	(Alathur et al., 2016; Campbell et al., 1954; Gastil and Xenos, 2010)
PEOU	Perceived Ease of Use	Extended construct	Based on (Dini and Øystein, 2016; Johannessen and Munkvold, 2012), and was adopted from (Davis, 1989).
PU	Perceived Usefulness	Extended construct	Based on (Dini and Øystein, 2016; Johannessen and Munkvold, 2012) and was adopted from (Davis, 1989).
COMP	Compatibility	Extended construct	Based on (Dini and Øystein, 2016; Johannessen and Munkvold, 2012), and was adopted from (Mathieson, 1991; Rogers, 1995; Taylor and Todd, 1995).
CT_FB	Trust in Facebook (Technology)	Extended construct	Adopted from: (Carter and Bélanger, 2005; Hofmann et al., 2012; Ozkan and Kanat, 2011; Titah and Barki, 2006)
CT_GOV	Trust in Government	Extended construct	Adopted from: (Carter and Bélanger, 2005; Hofmann et al., 2012; Ozkan and Kanat, 2011; Titah and Barki, 2006)
FC	Facilitating Condition	Extended construct	(Taylor and Todd, 1995)

Table 4. Definitions of Constructs in Proposed Model

CONSTRUCTS	DESCRIPTION	SOURCES
BI	“How hard people are willing to try, or how much of an effort they are planning to exert, to perform the behavior”.	(Ajzen, 1991)
ATT	“The degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question”	(Ajzen, 1991)
SN	“The perceived social pressure to perform or not to perform the behavior”	(Ajzen, 1991)
PBC	“The perceived ease or difficulty of performing the behavior”	(Ajzen, 1991; Taylor and Todd, 1995)
PV	The individual overall assessment of the utility of performing the behavior based on perceptions of what is received and what is given.	(Zeithaml, 1988)
PE	A citizen’s belief in his/her ability and capability to participate in e-Participation initiatives.	(Alathur et al., 2016; Campbell et

PEOU	"The degree to which a person believes that using a particular system would be free of effort"	al., 1954; Gastil and Xenos, 2010) (Davis, 1989)
PU	"The degree to which a person believes that using a particular system would enhance his/her job performance"	(Davis, 1989)
COMP	"The degree to which an innovation is perceived as being fit and consistent with existing values and needs"	(Rogers, 1995; Taylor and Todd, 1995)
CT_GOV	The extent to which citizens believe government agencies can be trusted in carrying out online transactions with them.	(Carter and Bélanger, 2005; Teo et al., 2008)
CT_FB	Citizens' positive or negative feeling about performing various target behavioral actions on Facebook networks.	(Shin, 2010)
FC	The availability of specialized resources needed to engage in a behavior.	(Taylor and Todd, 1995)

4.4 Study Hypotheses

The proposed model extends TPB constructs (BI, ATT, SN, and PBC) with the following constructs: PV and PE as antecedents of BI; PV, PE, PEOU, PU, COMP, CT_FB, and CT_GOV as antecedents of ATT; PE, PEOU, PU, COMP, CT_FB, and CT_GOV as antecedents of PV; and FC as antecedent of PBC. The rationality for including them is explained in the following four subsections.

4.4.1 Attitude, Subjective Norms, and Perceived Behavior Control

The three basic constructs of TPB include ATT, SN and PBC. While TPB suppose that ATT has a significant influence on BI, and BI is a good predictor of AB, it also stresses that a behavior is not simply determined by personal ATT, but also by SN influences (Ajzen, 1991). In meaning, BI of a person is influenced by opinions of others who are important to him/her, such as family and friends. Several prior studies in government context have widely proven the impact of ATT and SN on BI (Hung et al., 2013; Ozkan and Kanat, 2011).

The original TPB theorizes that the attitude construct plays a central role by influencing the behavior intention, which then affects the actual behavior. As pointed by Al-Hujran et al. (2015), several studies from various disciplines (e.g. IS, e-commerce, online banking, and mobile

government) assert the role of attitude in voluntary setting. In such studies, attitude has been found to have a significant role with behavioral intentions (i.e., intention to use voluntary IS/IT system or to use voluntary mobile e-Government services). For instance, attitude construct has significant effect on users intention to join social network sites (Osorio and Papagiannidis, 2014), as well as to continue using them (Al-Debei et al., 2013). Other examples can be found in e-Government context. For instance, Hung et al. (2013) has noted that citizens' attitude toward using mobile e-Government services has significant impact on their intention to use these services. In line with such finding, but based on a different theoretical grounding (i.e. extended TAM), Al-Hujran et al. (2015) found that citizens' intention to use voluntary e-Government services is mainly determined by their attitude toward using these services. Another study of (Al-Hujran et al., 2014), within e-Participation Jordan context, found direct effect of citizens' attitude and subjective norms on Jordanian citizens intention to use e-Participation tools. Therefore, in this study we argue for the significant role of attitude in predicting the behavioral intention to use e-Participation through Facebook, due to the voluntary nature of using these activities.

Generally, citizens who have a positive attitude and perceived a positive social support are high towards e-Participation are more likely to engage in e-Participation initiatives (Alharbi et al., 2016; Al-Hujran et al., 2014; Nam, 2012a). In the e-Participation initiatives through Facebook, citizens expect to interact with government as well as with each other. Such interactions would be publicly noticed by friends or relatives possessing Facebook account. Therefore, we argue that citizens tend to involve in e-Participation activities as a result of their personal attitude and through induction by others who are within their circle of influence. In thus, ATT and SN appear as crucial constructs when citizens decide to be involved in e-Participation. Thus, this study proposes the following hypotheses;

H1. *Attitude of citizens towards the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.*

H2. *Subjective norms of citizens in relation to the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.*

PBC construct has received considerable empirical support as a significant predictor of BI (Ajzen, 1991; Taylor and Todd, 1995). PBC has been found as the second largest direct effect on citizens' intentions to use e-Government services (Ozkan and Kanat, 2011). PBC has a significant effect on citizens' intentions to use e-Participation tools (Al-Hujran et al., 2014). The construct also appears to be an important factor of user intention to join social network sites (Osorio and Papagiannidis, 2014), as well as to continue using them (Al-Debei et al., 2013). Following this notion, hypothesis H3 was formulated.

***H3.** Perceived behavior control of citizens in relation to participation engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.*

4.4.2 Perceived Value

Through e-Participation initiatives, citizens need to perceive that their participation involvement is taken seriously, that someone will be affected or that their contribution matters (Bertot et al., 2010a; Macintosh and Whyte, 2008; Mergel, 2013b; Wahid and Sæbø, 2014). Usually, citizens will not participate if, for instance, a government does not listen to citizens and/or if they do not perceive an effect for their involvement in government affairs and decisions (Macintosh and Whyte, 2008; Sæbø et al., 2008). Generally, the literature review conducted in this study shows that such factor is not extensively researched in e-Participation studies. Similar results have been found in e-Government literature (Al-Hujran et al., 2015). The authors found few e-Government researches that empirically explore the relationship between the value of using e-Government services with citizens' attitude and intentions toward using these services. One of such few studies is Nam (2012a). The study aimed to identify relevant factors influencing citizens' attitude toward open government (or government 2.0). The findings show that perceived value of open government opportunities (along with higher level of citizens' general trust in government) has a greater influence in modelling their attitudes toward open government.

In accordance with TPB, an individual is likely to perform a behavior when that behavior is expected to produce a desirable outcome (Ajzen, 2006). This is in agreement with the underlying assumption of UTAUT (Venkatesh et al., 2003), which suggests that positive outcome expectations have directly positive effect on users intention to use a system. The current study stresses that citizens' expectations of producing a positive outcomes or values from

e-Participation initiatives through Facebook is significant to increase their tendency to get involved in such initiatives. Interestingly, the result of (Al-Debei et al., 2013) shows that extracting TPB by perceived value construct, which not only significantly affects users' intention and actual using of Facebook, but it also exerts the highest explanatory power and predictive ability toward such using. In consequence, we extend TPB by adding a new major construct labeled "perceived value" (PV). The construct of PV is relatively close to perceived consequences presented by Theory of Interpersonal Behavior (Triandis, 1980). In the theory model, perceived consequences refer to the potential values or outcomes that the behavior may generate or bring to the individual after he/she performs the behavior. According to the theory, such factor may have an effect on an individual's behavior intention.

PV basically taken from a marketing concept, refers to "the consumer's overall assessment of the utility of a product based on what is received and what is given" (Zeithaml, 1988). PV is widely recognized as an important factor to predict customers' behavioral intentions (Cronin et al., 2000). While such term is primary important in IT adoption (Kim et al., 2007), as well as business organizations, non-profit organizations are not an exception (Cronin et al., 2000). In addition, the results of (Al-Hujran et al., 2015) study indicated that public PV has significant impacts on citizens' attitude toward using e-Government services. It also found that the PV of open government opportunities played a positive significant role in modelling their attitudes for open government (Nam, 2012a). Also, (Wang, 2014) discusses about the important role of PV in citizens' continued usage of mobile government.

The PV to citizens is one of major success factors that should be considered when designing e-Participation initiatives (Panopoulou et al., 2014). Citizen engagement into e-Participation initiatives must have a significant influence on the way that policy makers decide, if its potential is to be fulfilled. So, it deemed reasonable to suggest that positive citizens' expectations of getting hold value and benefits from engaging in e-Participation initiatives could increase their intention to get involved in such initiatives. Examples of citizens' positive expectations of values and benefits include offering flexibility for citizens to provide feedback, ensuring government responsiveness, generating a culture of transparency and accountability, and improving the consideration of citizens' inputs in government decision-making processes.

Additionally, we also argue that a positive ATT, that in turn creates more BI toward involving in e-Participation initiatives, may be a consequence of the citizens' evaluations of their beliefs about the positive value of their contributions. Therefore, the following hypotheses were posed:

***H4.** Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's intentions to participate in government- led e-Participation initiatives through Facebook.*

***H5.** Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's attitude to participate in government- led e-Participation initiatives through Facebook.*

4.4.3 Participation Efficacy

Participation efficacy (PE) reflects a citizen belief about his/her capability to participate (Freschi et al., 2009). The term is derived from the political efficacy concept, which is defined as a citizen feeling of his/her ability to play an important part in making political and social changes possible (Campbell et al., 1954).

Few prior studies have discussed or attempt to conceptualize the participation efficacy term (Alathur et al., 2016), which we define here as a citizen's belief in his/her ability and capability to participate in e-Participation initiatives. PE is proposed for the purpose of this research as responding to calls for capturing suitable factors that enhance the applications of e-Participation (Macintosh et al., 2009a), and also to capture emotional factors that were excluded in the original TPB model (Benbasat and Barki, 2007). Furthermore, PE captures emotional concerns to be encompassed in the acceptance and adoption models as advised by (Straub, 2009).

The sense of political efficacy is considered a predictor factor for citizens' political engagement (Gastil and Xenos, 2010; Gil de Zúñiga et al., 2014). More recently, PE has introduced and confirmed as a significant predictor of intention to participate in government-led e-Participation initiatives (Alathur et al., 2016). Consequently, it can be assumed that if a citizen is confident in his/her ability to participate, then he/she would have positive attitude towards

participation and would be very likely to get involved in e-Participation activities. It is also reasonable to propose that citizens with higher confidence of their ability to provide valuable contribution would be expecting to perceive more benefits and higher level of value to be delivered from their engaging in e-Participation initiatives.

Thus, the present study suggests that a strong sense of citizens' participation efficacy can heighten their attitude and intention to get involved in e-Participation initiatives.

***H6.** Higher level of citizens' participation efficacy positively affects their intentions to participate in government- led e-Participation initiatives through Facebook.*

***H7.** Higher level of citizens' participation efficacy will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

***H8.** Higher level of citizens' participation efficacy will be positively related to higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook.*

4.4.4 Perceived Ease of Use, Perceived Usefulness, and Compatibility of Facebook

With the aim of explaining and predicting Information Systems and Technology (IST) user's acceptance, Taylor and Todd indicate the importance of adding suitable factors to improve the applicability of TPB (Taylor and Todd, 1995). As we mentioned earlier, the authors indicated PU, PEOU, and COMP that comprise ATT. PEOU refers to "the degree to which a person believes that using a particular system would be free of effort", and PU is "the degree to which a person believes that using a particular system would enhance his/her job performance" (Davis, 1989). Generally, citizens' intention to use a particular system will increase if they find that the system is useful (PU) and easy to use (PEOU) (Davis, 1989). There is quite consensus among scholars about the great and positively impact of such two factors related to the user's acceptance and adoption of information technology or system (Dwivedi et al., 2010; King and He, 2006; Venkatesh et al., 2003). Similarly, such influence has been widely approved related to the citizen's acceptance and adoption of e-Government systems (Gupta et al., 2016; Hofmann et al., 2012; Kumar et al., 2007; Rana et al., 2013; Tan et al., 2008; Titah and Barki, 2006, 2008).

Regarding Facebook use, the findings of Lin and Lu (2011) show that usefulness is the third most influential factor in people's continued use of social media, coming after enjoyment and number of peers as the top two influence factors (Lin and Lu, 2011).

In Jordan context, several studies found that PU and PEOU have a significant positive influence on Jordanian citizen's intention to use e-Government services (Al Hujran et al., 2013; Alryalat et al., 2013a). In what relates to e-Participation as a component of bigger e-Government project in Arabic countries (i.e., Jordan, Saudi Arabia, and Bahrain), several empirical evidences showed that the PU and PEOU can enhance citizen's attitude and in turn intention to use e-Participation tools through e-Government websites (Alharbi et al., 2016; Al-Hujran et al., 2014; Ali et al., 2015; Al-Quraan and Abu-Shanab, 2015). Such researches indicated that e-Participation initiative might be failed concerning attract citizens to be engaged if citizens found that e-Participation website abreast with its tools are difficult to use and not useful to them.

Considering that interacting with government through social media is a significant change compared to interacting through official government websites, it can be assumed that citizens would be not involved unless they perceive that having such interaction is compatible or aligned with their individual lifestyles or values. Such assumption leads us to another potential factor – i.e. compatibility (COMP). The term refers to the degree in which an innovation (new technology) is perceived as being consistent with existing values and needs of potential adopters (Rogers, 1995; Taylor and Todd, 1995). COMP has a direct impact in a person's attitude (Taylor and Todd, 1995) and an impact on citizens' intention to use e-Government services (Carter and Bélanger, 2005). The COMP factor highlights the significant importance of the context and seems respectively close to the term of “e-Participation tool relevance and appearance”, suggested by Macintosh and Whyte in 2008 (Macintosh and Whyte, 2008). These authors describe such features as the degree to which an e-Participation tool is being liked enough to be used by intended users. The concept of COMP aims to investigate the way citizens perceived the “fit” of Facebook technology with an individual's general situation impacts his/her attitude toward e-Participation initiatives acceptance. Since citizens may feel more comfortable expressing themselves in social media context when opportunities arise (Yu, 2016), thus COMP may influence citizens' attitude. We will therefore integrate this factor into the model.

The properly use of social media by governments has positive impact on changing citizens' perceptions and attitudes toward public issues, and subsequently motivating them to participate (Lee and Kotler, 2011). Overall, little research has focused on the relevance of social media networks as a platform and technology intermediary that might foster citizen to involve in e-Participation activities (Dini and Øystein, 2016) and to interact with government (Wang et al., 2016). This construct analyzing the capabilities of Facebook for supporting e-Participation. Therefore, the current study suggests that Facebook PEOU, PU, and COMP, which derived from (Davis, 1989; Rogers, 1995; Taylor and Todd, 1995) – are expected to positively influence citizens' attitude towards their engagement in e-Participation initiatives.

The success of social media use as e-Participation tools implies assuring the capabilities qualifications and readiness of such technology for the purposes of e-Participation. There are several calls for exploring the relationship between technological aspects of social media platforms and e-Participation up-take (Dini and Øystein, 2016; Dini et al., 2016; Johannessen and Munkvold, 2012). Only a few, if none, previous studies have practically examined the influence of social media networks design and features, particularly Facebook, on citizens' intention to use such networks in the context of e-Participation. As we are considering Facebook as a platform or a medium for e-Participation, we aim to investigate potentialities of Facebook characteristics (PEOU, PU, and COMP) that might facilitate (or hinder) citizens' engagement in e-Participation initiatives. We aim to investigate the potential impact of the technological functionality and the infrastructure features, as well as the affordance aspects of Facebook platform on attracting more citizens, affecting their attitude and behavior, enabling and creating more engagement, and, ultimately, increasing citizens participation (Chouikh et al., 2016; Dini et al., 2016; Johannessen and Munkvold, 2012). Thus, we posit the following hypotheses:

H9. *Higher levels of perceived ease of use of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

H10. *Higher levels of perceived usefulness of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

H11. *Higher levels of Facebook compatibility will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

Keeping with above discussion, Macintosh and Whyte (Macintosh and Whyte, 2008) developed an analytical framework in order to evaluate the effectiveness of e-Participation initiatives in terms of engaging wider audience and influence the policy process. The authors proposed several evaluation criteria that consider three perspectives: democratic, project and socio-technical. The later perspective considers to what extent the design of the digital tool used directly affects the outcomes. This research work also emphasizes that the role of e-Participation tool design might directly affect the e-Participation expected outcomes (Macintosh and Whyte, 2008). TAM and Delone and McLean models previously confirm that the overall technical performance of the system (such as PEOU) have a direct influence to the perceived value of using that system (Davis, 1989; Delone and McLean, 2003).

Furthermore, even in more mature partner field such as e-Government, the study of (Hofmann et al., 2012) has found that no e-Government acceptance and adoption study considers the effect of communication channels in their models explaining citizens' acceptance and adoption. This is especially relevant to e-Participation context that attracting more citizens to participate basically depends on meeting those citizens in a communication channel that they prefer, specially social media (Karantzeni and G. Gouscos, 2013; Lacigova et al., 2012). Therefore, we assumed that the preference of Facebook by citizens as the communication channel and the platform for conducting e-Participation initiatives, might have an impact on their perceived value of engaging in e-Participation initiatives. The current study suggests that Facebook PEOU, PU, and COMP are expected to positively influence citizens perceived value of engaging in e-Participation through Facebook. Such values include, for example, easily enabling citizens to connect with government officials; providing citizens with updated and valued information; and facilitating their contributions to policy and government decision-making processes. Consequently, we posit the following hypothesis:

H12. *Higher levels of perceived ease of use of Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.*

H13. *Higher levels of perceived usefulness of Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.*

H14. *Higher levels of Facebook compatibility will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.*

4.4.5 Citizens' Trust in Government and in Facebook

It is extensively supported that citizens' trust in government plays a significant role as a motivator for citizens' acceptance and adoption of e-Government systems (Bélanger and Carter, 2008; Carter and Bélanger, 2005; Hofmann et al., 2012; Tan et al., 2008). Trust is a necessary condition for an increased citizens' engagement and participation (Khan et al., 2014; Reddick, 2011). Similar result from Jordan studies indicates that trust in government is significant predictors of Jordanian citizens' intentions to use e-Government services (Abu-Shanab, 2014; Al-Hujran et al., 2015; Alomari, 2014), in particular e-voting websites (Alomari, 2016).

While some studies have emphasized the role of trust in e-Participation context might positively influence the intended of citizens usage (Berntzen and Karamagioli, 2010; Bertot et al., 2010a; Macintosh et al., 2009a; Panopoulou et al., 2014), the concept of trust is not far researched in the context of e-Participation (Dini and Øystein, 2016; Scherer and Wimmer, 2014).

This research adapts the definition of "trust in government" to the e-Participation context, considering it as the extent to which citizens believe that government is reliable and can be trusted in carrying out e-Participation transactions (Carter and Bélanger, 2005). The concept of citizen trust in government is consistently identified as a key predictor of citizens' attitude and then intention to use e-Government services (Bélanger and Carter, 2008). Different previous studies have found that citizens' trust in government has significant influence on their attitude and intention to engage in e-Participation; citizens who are having more trust (confident) for government, are more likely to become a part of participatory activities (Abu-Shanab and Al-Dalou, 2016; Alharbi et al., 2016; Reddick, 2011; Wimmer et al., 2015). Several studies highlight the importance of citizens trust in government as one of the most important prerequisites factor for taking part in e-Participation initiatives (Bertot et al., 2010b, 2010a). Lee and Kim (2014) study shows that a lack of citizens trust in government hinders their expectation, what affect their active participation in policy decision-making processes (Lee and Kim, 2014). Nam (2012) found that citizens who are having more trust (confident) in government, are more likely to have high

expectation that related benefits and values will be gained when they use Open Government services. Reasonably, citizens probably will not participate if they do not anticipate gaining expected benefits or values from engaging in e-Participation initiatives. Thus, it is expected that citizens' trust will affect their attitude as well as their perceived value of participating in e-Participation initiatives through Facebook.

Several studies emphasized that citizens must not only trust in government but also in the technologies they use to perform the online transactions (Carter and Bélanger, 2005; Hofmann et al., 2012). In simple words, it refers to citizens trust in technology itself (Berntzen and Karamagioli, 2010). Trust in enabling technologies in government context refers to citizens trust in the mechanism through which government service is provided (Bélanger and Carter, 2008). Trust in internet was found to had a positive impact on citizens intention to use e-Government services (Bélanger and Carter, 2008). Nevertheless, trust in government is still more significant than trust in technology on citizens' intention to use e-Government services (Alomari et al., 2012; Bélanger and Carter, 2008; Nam, 2014).

Since several types of technologies differ in terms of its reliability, functionality, application, and helpfulness, consequently, the trust in those technologies also differs (Mcknight et al., 2011). According to authors, the trust in a specific form of technologies differs from trust in other forms of technology. They call further researches on trust in technology to be very strict and clearer when using the concept of trust in technology (Mcknight et al., 2011).

Consequently, as social media networks are provided by different third-party entities, trust in social media, described as citizens' positive or negative feeling about performing various target behavioral actions on social media (Shin, 2010), might impact citizens ATT and PV. Hence, one's general propensity to trust will have an impact on citizens perceived value and on their attitude of e-Participation initiatives through its influence on trust of the government and trust of social media. According to the 2014 Edelman Trust Barometer summary report⁶, trust in government fell 14% since 2013, while trust in social media as information online source has increased by 45%, up from 41% in 2013 (Rospigliosi and Greener, 2014).

⁶ Available at <http://www.edelman.com/insights/intellectualproperty/2014-edelman-trust-barometer/about-trust/executive-summary/>

As Carter and Bélanger (2005, p.9) highlighted that “citizens must have confidence in both the government and the enabling technologies”, we adopt this distinction in this study, and consider that citizens trust includes both trust in the government and trust in Facebook (Facebook as technology platform). A study of al-Hujran et al. (2015) indicated that trust in e-Government portal and/or website has significant impacts on perceived public value, which in turn influences citizens’ attitude to access government services. Similarly, as the study case is on e-Participation initiatives conducted through Facebook that is owned and maintained by a private company, higher level of trust in Facebook is assumed to create citizens’ positive perspective regarding the expected benefits or values of e-Participation initiatives that are conducted through Facebook. So, it is rational to assume that the PV of such initiatives might vary depending on citizens’ trust in Facebook. It worth noted a lack of empirical attempts in literature that examine the relationship between citizens’ trust in Facebook and citizens perceived value or benefits of engaging in e-Participation through Facebook.

Following this notion, hypotheses H15, H16, H17, and H18 were formulated.

H15: *Higher levels of trust on Facebook will be positively related to higher levels of citizen’s attitude towards government-led e-Participation initiatives through Facebook.*

H16: *Higher levels of citizens’ trust in local government will be positively related to higher levels of citizen’s attitude towards government-led e-Participation initiatives through Facebook.*

H17. *Higher levels of trust on Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.*

H18. *Higher levels of citizens’ trust in local government will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.*

4.4.6 Facilitating Conditions

TPB postulates that a behavior is based on a person’s intention regarding that behavior, which in turn is a function of the person’s ATT, SN, and PBC, see Figure 4. PBC is person’s perception of internal and external controls constraining the intended behavior. More recent TPB improvements advance that a person would intend to further engage in a behavior when

facilitating conditions (FC) are available and supporting him/her to complete the behavior. For specific purpose of the current study, an important addition to PBC construct is related to the recognition of FC which includes two factors, namely government's ability to manage e-Participation initiatives (GOV_COMT), and freedom to participate (FP). GOV_COMT refers to the perceived expectation from citizens for government institutions to perform the behavior of interest effectively, honestly and faithfully (Bertot et al., 2010a; Feeney and Welch, 2012b; Wahid and Sæbø, 2014). Whereas, FP refers to the right of citizen to participate, speech, and express opinions publicly without censorship or restraint by the government.

FC concerns with the objective factors in the environment that make an act of use easy to accomplish (Ajzen, 2006). Here, we notice that many of the e-Participation initiatives presenting low level of citizens engagement were being operated under the absence of real commitment for adopting truly dialogue with citizens (Bertot et al., 2010a; Wahid and Sæbø, 2014). The use of social media tools might shift the power relationship between government and citizens. Perhaps, government officials often resist this shifting in due to what can be labeled as a losing of their control or power (Bertot et al., 2010b, 2010a).

Moreover, (Feeney and Welch, 2012a; Mergel, 2013b) have also questioned government's ability to manage e-Participation initiatives. Government adoption of social media for e-Participation presents numerous challenges concerning the ability and capability of government to operate such initiatives, specifically the adequacy of governments' human resources. By analyzing data from 500 U.S. cities, the studies shown that using social media fora to interact with citizens certainly require more efforts from government institutions than those that rely on traditional methods, e.g. sending e-mails (Feeney and Welch, 2012a).

In similar vein, according to Arab social media report, building the capacity of government employees is one major change that government needs to make in Arabic region in order to better leverage social media for citizen engagement (Arab Social Media Report, 2014). Others scholar highlighted how input from the citizens will be used and how their feedback to the citizen will be handled (Berntzen and Karamagioli, 2010; Bertot et al., 2010a; Feeney and Welch, 2012b; Larsson, 2013a; Mergel, 2013a, 2013b). A recent exploratory study that identified and analyzed 156 USA cities content on social media presence has found that most cities have integrated

social media into daily operations, however, many do not provide effective social media policies to guide such use (Bennett and Manoharan, 2016).

While freedom of participate impediments is an important element (Alathur et al., 2016; Berntzen and Karamagioli, 2010), in particular when using social media within e-Participation, such element is yet scarcely explored (Dini and Øystein, 2016). Freedom to participate could be measured by the freedom of speech and expression. Therefore, it is reasonable to consider that the general positive atmosphere of freedom for citizens to participate and theirs' believes in government commitment and ability to manage such e-Participation initiatives appear as significant key factors for attracting more citizens, which in turn create more positive attention towards involvement in e-Participation through social media initiatives. If government agencies expect citizens to engage in their e-Participation initiatives, they must acknowledge and enhance citizens' views concerning the ability of government to operate those initiatives.

This study considered that government's ability to manage e-Participation initiatives and freedom to participate are two antecedent factors of PBC, which also capture context concerns to be encompassed in the acceptance and adoption models as advised by Straub (2009). In sum, we consider GOV_COMT and FP important factors that are expected to jointly influence PBC. Following this notion, hypothesis H19 was formulated:

H19. *Facilitating conditions in relation to participation in government-led e-Participation initiatives through Facebook positively affects citizen Perceived behavior control.*

All study hypotheses, H1 to H 19, are depicted in Figure 6. Next section discusses the study approach to be followed in order to conduct the study practically.

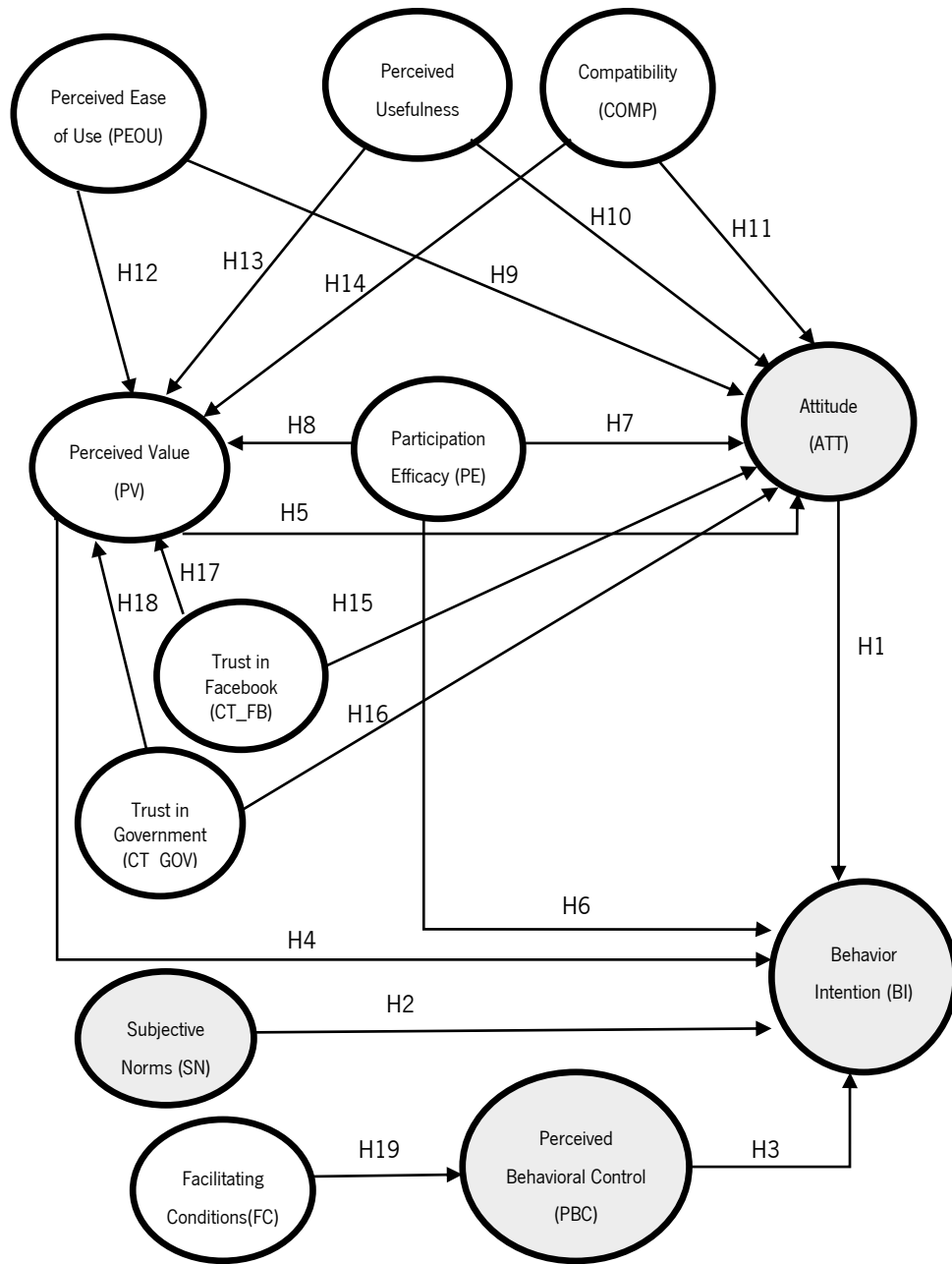


Figure 6. The Study Model with Related Hypotheses

4.5 Study Approach

The research approach is a specified methodology or detailed procedures for collecting and analyzing the required information for answering the research questions and, ultimately, actualizing the research aims (Leedy and Ormrod, 2005; Zikmund et al., 2013). There are two

dominant research approaches that have found wide application in research: qualitative and quantitative approaches. The choice of using an approach must depend on matching the research approach to the research questions being asked and to the nature of the phenomenon being investigated (Babbie, 2015; Leedy and Ormrod, 2005; Sekaran and Bougie, 2010; Zikmund et al., 2013).

Briefly, the quantitative approach is an approach of inquiry that addresses research problem, questions, and objectives through empirical assessments that involve the collection and analysis of data in numerical form: numbers and statistics (Muijs, 2010; Sekaran and Bougie, 2010; Zikmund et al., 2013). Generally, quantitative research is not focused only on measuring the subject of enquiry by finding “what is happening” and “how and why is it happening” in the real world, but could be eventually extended to predict “what would be happening” (Leedy and Ormrod, 2005; Muijs, 2010; Sukamolson, 2010).

A quantitative approach is selected for the purposes of this study since it contains features that enable us to answer the study question as they have been stated in Section 2.3 as well as to verify, test, and measure relationships and hypotheses as they have been formulated in Sections 4.4. In details, quantitative approach is best suited for the study since:

- 1) The current study generally aims to understand, explain, and measure citizens' intention and attitude to use of government-led e-Participation initiatives through Facebook. This matches with the main principle of quantitative approach that seeks to explain and measure a particular phenomenon. A quantitative approach is adequate when researchers investigate and measure what and how is happening to the subject of inquiry. For example, the quantitative approach allows researchers to explain and measure people actions, attitudes, or behaviors (Leedy and Ormrod, 2005; Muijs, 2010; Sukamolson, 2010). For this reason, a quantitative approach is adequate to answer questions number 1 and 3 of this study: What is citizens' intention to engage in government-led e-Participation initiatives through Facebook? What is citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?
- 2) The current study pursuits for identifying and determining the most considerable factors that influence citizens' intention towards accepting and engaging in government-led

e-Participation initiatives through Facebook. As we discussed in section 4.3, this process was based on TPB and complemented with relevant studies from various research disciplines. This matches with a quantitative approach that typically builds upon existing theories and precise literature review, in order to enable and help researchers defining, specifying, and deriving prospected variables (independent variables) that might have a relationship or have an impact on the studied phenomenon (dependent variable). Quantitative research is extensively suited for hypotheses testing where researchers advance the relationship between the variables of interest in the study and pose this in terms of questions or hypotheses. Thus, quantitative approach suits for helping us to answer the research questions number 2 and 4 of the study: What are the factors considered relevant to influence citizens' intention to accept and to engage in government-led e-Participation initiatives through Facebook? What are the factors considered relevant to influence citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?

4.6 Establishing Reliability and Validity

Generally, the two-important key indicative of accuracy and precision of research results are reliability and validity assessments. Both terms are commonly associated and well theorized with quantitative research approach (Sekaran and Bougie, 2010; Straub et al., 2004; Zikmund et al., 2013). While validity relates to what should be measured, reliability relates to how it should be measured (Hair, 2009). Overall, such standards ensure that inferences and conclusions drawn in research represent and reflect the truth in the real world (De Vaus and de Vaus, 2001; Straub et al., 2004).

Reliability represents the stability and accuracy of a measurement and reflects the degree to which a measurement is repeatable and consistent, subsequently influencing the stability of findings (Sekaran and Bougie, 2010; Zikmund et al., 2013). Validity represents the truthfulness of findings. It refers to how well a measurement actually measures what it purports (supposed) to measure (Carmines and Zeller, 1979; Nunnally, 1978; Sekaran and Bougie, 2010; Zikmund et al., 2013).

Fundamentally, without sufficient level of validity and reliability of the research instrument, the findings of a research might be moot and doubtful (Boudreau et al., 2001; Straub et al., 2004). Following Straub (1989) suggestion that reliability and validity should be understood, explained and addressed, these concepts will be discussed in following subsections 4.6.1 and 4.6.2.

4.6.1 Reliability

Reliability concerns with issues of stability and consistency of a measurement, it is the extent of which a measurement is free of random error and therefore produces repeatable and consistent results (Carmines and Zeller, 1979; Nunnally, 1978). One of the basic and suggested methods for estimating the reliability of a measurement is the “Internal Consistency” method. Internal consistency is the extent to which a set of items (or indicators) in the instrument that measure the same construct are homogeneous or “hang together as a set” (Sekaran and Bougie, 2010; Zikmund et al., 2013). A measure’s internal consistency is commonly asserted through the calculation of Cronbach’s Coefficient Alpha values (Cronbach, 1951). The values of Cronbach’s Coefficient Alpha (Cronbach’s α) range from zero (0) to one (1). As a rule of thumb, the higher the value of Cronbach’s α , the more reliable of the measurement, suggesting that the set of items, which measure a single construct, are well related and hang to each other, and are suitable for measuring the same construct.

According to Sekaran and Bougie (2010) and Zikmund et al. (2013), Cronbach’s α value over 0.90 is considered to be very good, Cronbach’s α value in the range of 0.80 is considered to be good, Cronbach’s α value in the range of 0.70 is considered to be acceptable, whereas the Cronbach’s α values less than 0.60 are considered to be poor (Sekaran and Bougie, 2010; Zikmund et al., 2013). However, we agree with Carmines and Zeller (1979) recommendations that Cronbach’s α value should not be below 0.80 for widely used scales studies (Carmines and Zeller, 1979). We also believe, following Lance et al. (2006), that reliabilities of 0.70 are conditionally acceptable if a researcher wants to save time and effort in a new area of research by using measures that have only modest reliabilities. Hair (2009) echoed this sentiment, by considering that Cronbach’s α value between 0.60 and 0.70 indicates the lower limit of acceptability being accepted only in exploratory research contexts (Hair, 2009). Table 5 shows

the commonly accepted rule of thumb that will be adopted in this study as guidelines for interpreting test reliability of Cronbach's α values.

Table 5. Cronbach's Alpha Values

CRONBACH'S ALPHA VALUES	INTERNAL CONSISTENCY RELIABILITY
Cronbach's Alpha value is greater or equal to 0.90	Excellent
Cronbach's Alpha value 0.80 to 0.90	Very Good
Cronbach's Alpha value 0.70 to 0.80	Good
Cronbach's Alpha value 0.60 to 0.70	Acceptable
Cronbach's Alpha value 0.50 to 0.60	Poor
Cronbach's Alpha value in the range of or less than .50	Refuse

- **Cronbach alpha and Inter-item correlation**

Another issue that should be kept in mind is that the value of Cronbach's α heavily depends on the average inter-item correlation (AIC) and the number of items composing the scale. AIC refers to the degree of homogeneousness between the items measuring the same given construct. The greater value of AIC for a set of item indicates a high level of homogeneity between such items (Carmines and Zeller, 1979). Generally, as the number of items of a scale increase and AIC among items either stay constant or increases, the value of coefficient alpha increases (Carmines and Zeller, 1979). This relationship clearly appears in Table 6, established by Carmines and Zeller (1979), which shows the value of alpha given a range number of items and a range in the AIC. We extended the original table by calculating extra values of alpha for others number of items (3, 5, 7, 9, 10, 11, and 12 items), and inserting another value for AIC (0.5). Based on Table 6, for instance, a 2-item scale with an AIC of 0.4 has an alpha of 0.572, a 10-item scale with the same AIC (0.4) has an alpha value of 0.870.

Based on information provided above, we set Table 7 that includes indicators for interpreting test reliability for a given number of items. Generally, it is recommended that AIC for any given number of items below 0.2 have poor inter-item correlations, suggesting they are not that well related to each other and might not be suitable for measuring a single construct. AIC

for any items that are above 0.5 tend to be very similar to each other. However, AIC for a certain number of items (e.g., 6 items and more) that is equal to 0.4 is also acceptable.

Table 6. Values of Alpha for a Given Number of Items and an Average Inter-Item Correlation.

NUMBER OF ITEMS	AVERAGE INTER-ITEM CORRELATION				
	0.2	0.4	0.5	0.6	0.8
2	0.333	0.572	0.667	0.750	0.889
3	0.428	0.666	0.750	0.818	0.923
4	0.500	0.770	0.800	0.857	0.941
5	0.555	0.790	0.833	0.882	0.952
6	0.600	0.800	0.857	0.900	0.960
7	0.636	0.823	0.875	0.913	0.965
8	0.666	0.842	0.889	0.924	0.970
9	0.692	0.857	0.900	0.931	0.972
10	0.714	0.870	0.909	0.938	0.976
11	0.733	0.880	0.916	0.942	0.977
12	0.750	0.889	0.923	0.947	0.979

Table 7. Indicator for Each Values of Alpha for a Given Number of Items and an Average Inter-Item Correlation

NUMBER OF ITEMS	AVERAGE INTER-ITEM CORRELATION				
	0.2	0.4	0.5	0.6	0.8
2	0.333	0.572	0.667	0.750	0.889
3	0.428	0.666	0.750	0.818	0.923
4	0.500	0.770	0.800	0.857	0.941
5	0.555	0.790	0.833	0.882	0.952
6	0.600	0.800	0.857	0.900	0.960
7	0.636	0.823	0.875	0.913	0.965
8	0.666	0.842	0.889	0.924	0.970
9	0.692	0.857	0.900	0.931	0.972
10	0.714	0.870	0.909	0.938	0.976
11	0.733	0.880	0.916	0.942	0.977
12	0.750	0.889	0.923	0.947	0.979
INDICATORS					
Poor or Refused	Good	Very Good	Excellent		

4.6.2 Validity

Validity is the measurement ability to measure what it is intended to measure (Carmines and Zeller, 1979; Nunnally, 1978; Sekaran and Bougie, 2010; Zikmund et al., 2013). When a

measurement failed to measure what it is designated to measure, a quantitative study is considered invalid (Nunnally, 1978; Sekaran and Bougie, 2010; Zikmund et al., 2013).

There are various types of validity that have been reported and presented in several related works such as content validity, on-creation validity, convergent validity, and discriminant validity (Carmines and Zeller, 1979; Sekaran and Bougie, 2010; Zikmund et al., 2013). Based on recommendations by (Straub et al., 2004) for the types of validity in IS quantitative researches, the current study will test and report three type of validity: content validity; construct validity (include convergent validity and discriminant validity); and design validity (include internal and external validity).

Content validity refers to the degree that a measurement adequately covers and reflects the construct of interest that is intended to measure (Carmines and Zeller, 1979). This type of validity raises two basic questions: (1) if the measurement items are properly and accurately drawn from the given theoretical construct that it proposes to measure (Nunnally, 1978; Sekaran and Bougie, 2010; Straub, 1989; Zikmund et al., 2013); (2) whether the researcher considered all possible items to capture the essence of that construct (Cronbach, 1971; Kerlinger, 1964). The establishment of content validity can be achieved through literature reviews and expertise referees (Straub, 1989; Straub et al., 2004). By literature review and experts' judgment, researchers ensure that the measure items that they will use to tab a given construct, truly, precisely, and comprehensively capture the core of that construct.

Construct validity "testifies to how well the results obtained from the use of the measure fit the theories around which the test is designed" (Sekaran and Bougie, 2010, 222). This validity is assessed through two types of validity: convergent validity and discriminant validity. Convergent validity results when measurement items correlates strongly with the assumed construct it is intended to measure, while discriminant validity results when that measurement item correlates weakly or not significantly with all other constructs (Sekaran and Bougie, 2010; Straub et al., 2004; Zikmund et al., 2013). In other words, the discriminant validity is the degree to which a set of factors measuring the same construct are truly distinct from other factors that are measuring other constructs in a measurement model (Hair, 2009). Empirically, construct validity is acceptable when the different instrument items that are measuring the same concept are

highly correlated with each other (convergent validity), and simultaneously when those measurement items correlate weakly with all other constructs (discriminant validity).

Generally, convergent validity is measured by three statistical tests: 1) Factor Loading Indicator; 2) Composite Reliability (CR); and 3) Average Variance Extracted (AVE). Briefly, the convergent validity to be assured requires that factor loadings for each item should exceed 0.50 CR should be above 0.7 of every main construct; and AVE, of every main construct should exceed 0.5 (Hair, 2009). As for discriminant validity, it is actually established when the square root of the AVE of a construct should exceed the correlation coefficients between that construct and other constructs in the model.

Design validity encompasses internal and external validity. Internal validity refers to the degree of confidence about that the causal relationships or cause-effect relationship between variables of a study are happened (Sekaran and Bougie, 2010; Zikmund et al., 2013). Overall, internal validity cares about that an independent variable X is truly responsible for any variance in the dependent variable Y (Zikmund et al., 2013). The correlation coefficient squared (known as the coefficient of determination, R^2) resulted from significant regression model, could be used to establish internal validity. R^2 value assesses the contribution of independent variable(s) to explaining variance in dependent variable in the regression model from a study sample. R^2 consists of a value between (0) and (1) and higher score means better. A high R^2 value indicates as an evidence of a good fit and predictive power of the model tested (Field, 2009; Hair, 2009). R^2 value shows how much independent variable(s) caused the observed variances in the dependent variable. According to the guidelines by Gaur & Gaur (2006), R^2 value less than (0.12) indicates weak model, R^2 value lies within (0.13) to (0.24) indicates moderate model, and R^2 value (0.25) and more indicates good model (Gaur and Gaur, 2006).

External validity refers to the extent of generalizability of the findings of a study to the population studied or to other environment, settings, or events (Sekaran and Bougie, 2010). Higher degree of external validity can allow researcher for projecting findings to the studied population. In thus, it could be counted on maximum external validity level to assure that any results observed in the research will also be seen in a predefined population. The higher external validity can be obtained by ensuring that, as far as possible, a study sample truly represents the total population (Zikmund et al., 2013). Generalizing the results of a survey to the population of

interest is mainly based on meeting two essential conditions: the sample is large enough and exactly or relatively represents the population from which it is taken.

4.7 Study Survey Questionnaire

The current study used survey as the method for gathering data. The survey questionnaire can be defined as “a systematic method for gathering information from (a sample of) entities for the purposes of constructing quantitative descriptors of the attributes of the larger population of which the entities are members” (Groves et al., 2009). Survey questionnaire is widely accepted for studying IS/IT adoption and implementation, particularly in e-Government research (Al-Shafi et al., 2009; Hofmann et al., 2012). For a long time, survey questionnaire is among the most popular methods used in IS research (Newsted et al., 1998; Pinsonneault and Kraemer, 1993) and it is expected to remain so (Abareshi and Martin, 2009).

The use of a survey questionnaire permits theoretical hypotheses or propositions to be tested, as it allows the researcher to determine the values and relations of variables through quantitative subjective approach (Newsted et al., 1998; Pinsonneault and Kraemer, 1993). Additionally, survey questionnaire can be used to predict cognitive human actions, such as opinion, behavior and attitude (Newsted et al., 1998; Saunders et al., 2011).

The survey questionnaire was preferred for the purpose of the current study because: (1) the population of the study is large and it is widely spread geographically (Bernard, 2011). Survey questionnaire could help the researcher in a highly economical way (including time, effort, and money) to gather various kinds of data from a large population. This is especially true for studies, as is the current study, involving sizeable sample and large geographic areas (De Vaus, 2013); (2) we know exactly what is required and how to measure the variables of interest (Sekaran and Bougie, 2010). Survey questionnaires tend to be used for explanatory research that seeks measuring and explaining cause and effect relationships between variables (Saunders et al., 2011; Zikmund et al., 2013); (3) survey questionnaire can give suggestive data that is perfectly suited to test the proposed relationships and hypotheses; (Gillham, 2008); (4) the study is dealing with literate respondents; and (5) we are confident in our ability of collecting and getting the required and the sufficient sample size that enable us to conduct meaningful and precise

statistical tests (the minimum sample size required for the current research is 384 responses, as we will explain later in section 4.8.3).

Finally, the good design of a questionnaire followed by an excellent application of it defiantly affords high support for researchers for projecting and generalizing findings to a predetermined population (Glock and Bennett, 1967). The establishment of a questionnaire might be done through the setting of good wording and well organized questions, the ensuring of its' validity and the creation of an aesthetic appearance for it. The good actual application of a survey might be achieved through the use of an adequate sample, a suitable sampling method, and an appropriate method for distributing the questionnaire. To pursuit such issues, the following sections discuss the way the study survey questionnaire has been developed (Section 4.7.1), written and validated (Section 4.7.2), translated (Section 4.7.3), and designed and distributed (Section 4.7.4).

4.7.1 Questionnaire Development

Good questions and a good questionnaire design are very serious issues because they will reduce errors that result from inaccuracies in responses recorded on the questionnaire, namely measurement errors (Dillman et al., 2014; Groves, 2004).

How to develop and how to design a good questionnaire has been the focus of much research and discussions. Among the proposed suggestions are those offered by (De Vaus, 2013; Dillman, 1978, 1991; Dillman et al., 2014; Dörnyei and Taguchi, 2009; Sekaran and Bougie, 2010; Zikmund et al., 2013). Plentiful and magnificent guidelines for constructing a good questionnaire were suggested such as: 1) Formulate easy-to-understand questions by using simple and conversational language (Questions wording). 2) Start with easy-to-answer questions, and move from general to more specific questions in a gradual manner (Questions organizing) (Dillman, 1991; Dillman et al., 2014; Zikmund et al., 2013). 3) Making the questionnaire more interesting and visually appealing (probably by using a suitable font size, colors, graphics and photos if applicable) would be very helpful (Questionnaire friendly design) (Dillman, 1991; Dillman et al., 2014; Sekaran and Bougie, 2010; Zikmund et al., 2013).

To collect quality data and to achieve higher response rates as possible, the researcher should give a considerable attention to every detail that might affect response behavior (Dillman,

1978). The study questionnaire followed the above principle, for instance. 1) The questionnaire was clear, simple, and short as possible, in order to make it easy and quickly to fill. Vocabulary and syntax were kept simple; sentences length was also often short. 2) All questionnaire questions were closed-type question. This type of questions provides fixed-alternative answers, which usually require taking less time and are easier for the respondent to answer rather than open-ended questions. Compared with open-ended questions, answering close-ended questions is found to be easy task or “low cost” behavior (Bosnjak et al., 2001), decreasing a survey drop-out rates (Knapp and Heidingsfelder, 1999), and reducing item non-responses (Reja et al., 2003), specifically on the online surveys. 3) Questions about each construct have been arranged and ordered into separate sections (only questions of three of the eight constructs have been joined in one same section). The sections were arranged sequentially according to a rational order.

4.7.2 Questionnaire Wording and Content Validation

The constructs of interest to this study are: ATT, SN, PBC, PV, PE, PEOU, PU, COMP, CT_FB, CT-GOV, and FC. The measurement items for each construct were borrowed, derived, or adopted from previous related studies. As we stated earlier, content validity of a measurement is asserted through conducting an appropriate and precise literature review along with experts' validation. In thus, to establish the current study measurement validity, two phases have been conducted:

1) Phase 1

The most relevant related works have been extensively reviewed and previous valid instruments have been studied to choose prior key items and to elicit new ones to be used in the study instrument. The measurement items were chosen and adopted, with modifications to fit the specific context of this study, from previous studies and instruments as follows.

Measurements for ATT, SN, PBC, and BI constructs were mainly adopted from (Ajzen, 1991, 2002, 2006; Mathieson, 1991; Taylor and Todd, 1995). As for PV construct, measurements were adopted from high related and diversity pool of studies such as (Al-Debei et al., 2013; Al-Hujran et al., 2015; Bertot et al., 2010b, 2012a, Bonsón et al., 2015, 2016; Kim et al., 2007; Mergel, 2013a; Wahid and Sæbø, 2015).

As for PEOU, PU, and COMP constructs, measurement items for PEOU and PU were derived and adopted from (Davis, 1989; Taylor and Todd, 1995; Venkatesh et al., 2003), and COMP items were also derived and adopted from (Mathieson, 1991; Rogers, 1995; Taylor and Todd, 1995). All previous measurements items were carefully adjusted to be more fitting for Facebook.

Measurement for CT_FB, and CT_GOV were adopted from (Carter and Bélanger, 2005; Hofmann et al., 2012; Teo et al., 2008). Measurement for PE were derived from (Alathur et al., 2016; Campbell et al., 1954; Gastil and Xenos, 2010). Finally, measurements of FC include measurements of freedom to participate (FP) that were derived from (Alathur et al., 2011, 2016; Reddick, 2011), and measurements for citizens' confidence in government ability and commitment to operate such initiatives (GOV_COMT) were derived from (Bertot et al., 2010b; Feeney and Welch, 2012b; Mergel, 2013a, 2013b; Wahid and Sæbø, 2014). This phase along with the study model took around six months to be performed.

2) Phase 2

The second phase comprises validation of the construct and items by experts. This phase, which lasted for around one month and a half, aimed to elicit expert's judgment about how well the chosen items are appropriate to measure the intended and the theoretical constructs of the study, as well as, how those items covered the essence of each construct. Three experts involved in the validation process were associate professors in the Management Information Systems departments at three Jordanian universities. The experts' selection process was based on their scientific publications and their research interests. They were also chosen as they appear to be more familiar with Jordan context (the country where the study was conducted).

Six experts have been contacted and being kindly asked to participate in this phase. While two experts have not answered our request and one expert has apologized for participation due to his heavy other duties, three experts kindly responded to our invitation and were very helpful, supportive, and graciously took part in the validation process.

Based on expert's feedback, three items were removed that seem duplicate or misleading. For example, among several items were set up to investigate citizens' opinion about government-led e-Participation initiatives through Facebook, one referee declare that there are two items are

not significantly different from each other's: (1) *"Compared to the effort I need to put in, engaging in government-led e-Participation initiatives through Facebook would be beneficial to me"*; (2) *"Compared to the time I need to spend, engaging in government-led e-Participation initiatives through Facebook would be worthwhile to me"*. Based on the referee advice, we removed the item number 2. Additionally, one item relates to subjective norms construct has been revised. The item *"Most people who I usually consult think that it is good for me to participate in government-led e-Participation initiatives through Facebook"* was used instead of the item *"Most people who influence my behavior would think that it is fine for me to participate in government-led e-Participation initiatives through Facebook"*.

Based on experts' feedback, Table 8 systematizes the questionnaire measurements, items, and their related sources and supporting references.

Table 8. Questionnaire Measurements, Items, Sources and Supported References

CONSTRUCT	ITEMS	SOURCES and SUPPORTED REFERENCES
PEOU	PEOU1. I find Facebook easy to use. PEOU2. I can easy learn how to use new applications and new updates of Facebook. PEOU3. Using Facebook requires little efforts.	The items was from (Davis, 1989; Taylor and Todd, 1995) and were adjusted to be more fitting for Facebook.
PU	PU1. Using Facebook increases my chances of achieving things (tasks) that are important to me. PU2. Generally, the advantages of Facebook outweigh the disadvantages. PU3. Overall, I find using Facebook is beneficial to me.	The items was from (Davis, 1989; Taylor and Todd, 1995) and were adjusted to be more fitting for Facebook.
COMP	COMP1. Using Facebook is compatible with my lifestyle. COMP2. Using Facebook is consistent with my values and my needs. COMP3. Using Facebook fits well into my daily life.	Source: (Mathieson, 1991; Rogers, 1995; Taylor and Todd, 1995).
CT_GOV	T_GOV1. The local government cares about me, my needs and wants. T_GOV2. The local government is honest in its dealings with me. T_GOV3. The local government keeps and fulfills its commitments. T_GOV4. Overall, I trust my local government.	Adopted from: (Carter and Bélanger, 2005; Hofmann et al., 2012; Teo et al., 2008).
CT_FB	T_FB1. Facebook cares about me, my needs and my wants. T_FB2. Facebook has enough and adequate protection techniques and mechanisms to make me feel safe and comfortable when I use it. T_FB3. Generally, Facebook is a robust, reliable and safe environment to be used. T_FB4. Overall, I trust Facebook.	Adopted from: (Carter and Bélanger, 2005).

PV	<p>PV1. Government-led e-Participation initiatives through Facebook would increase government transparency.</p> <p>PV2. Government-led e-Participation initiatives through Facebook would help local governments reach better decisions.</p> <p>PV3. Compared to the effort I need to put in, engaging in government-led e-Participation initiatives through Facebook would be beneficial to me.</p> <p>PV4. For me, the advantage of engaging in government-led e-Participation through Facebook outweighs the disadvantages.</p> <p>PV5. Overall, engaging in government-led e-Participation initiatives through Facebook would increase my sense of achievement and improve my status among people around me.</p> <p>PV6. If I participate in government-led e-Participation initiatives through Facebook, I will feel that I do something valuable for the community.</p> <p>PV7. Generally, my participation in government-led e-Participation initiatives through Facebook would NOT mean I am wasting my time and efforts.</p>	Derived from: (Al-Hujran et al., 2015; Bertot et al., 2010b, 2012a, Bonsón et al., 2015, 2016; Kim et al., 2007; Mergel, 2013a; Wahid and Sæbø, 2015)
SN	<p>SN1. Most people who are important to me would think that government-led e-Participation initiatives through Facebook is a good idea.</p> <p>SN2. Most people who I usually consult think that it is good for me to participate in government-led e-Participation initiatives through Facebook.</p> <p>SN3. Most people whose opinions I value would encourage me to participate in government-led e-Participation initiatives through Facebook.</p>	Source: (Ajzen, 1991, 2002, 2006).
PE	<p>PE1. I care about problems and issues that face my community.</p> <p>PE2. I have a pretty good knowledge and well-understanding about the important issues facing my community.</p> <p>PE3. I consider myself well-qualified to participate in community affairs.</p> <p>PE4. I believe I can provide valuable ideas, opinions, and rational perspectives related to community affairs.</p>	Derived from: (Alathur et al., 2016; Campbell et al., 1954; Gastil and Xenos, 2010)
FC includes FP and GOV_COMT	<p>FP1. In Jordan, generally, I can speak freely.</p> <p>FP2. In Jordan, I am able to express my opinions without any fear of verbal or physical violence or any kind of harmful consequences.</p> <p>FP3. In Jordan, freedom of expression is relatively good and protected.</p> <p>GOV_COMT1. The local government can be trusted to carry out e-Participation initiatives through Facebook honestly and faithfully.</p> <p>GOV_COMT2. I expect that the local government would be committed to the results of e-Participation initiatives through Facebook (I don't believe such initiatives would be fake)</p> <p>GOV_COMT3. The local government has enough ability and capability to manage and coordinate e-Participation initiatives through Facebook.</p>	<p>Derived from: (Alathur et al., 2011, 2016; Reddick, 2011)</p> <p>Derived from: (Bertot et al., 2010a; Feeney and Welch, 2012b; Mergel, 2013a, 2013b)</p>

	GOV_COMT4. The local government will seriously consider my opinions and feedback's in their future decisions.	
PBC	<p>PBC1. It is entirely up to me, whether I participate or not in government-led e-Participation initiatives through Facebook.</p> <p>PBC2. If I wish, I could participate in government-led e-Participation initiatives through Facebook without difficulty.</p> <p>PBC3. I believe that engaging in government-led e-Participation initiatives through Facebook would be entirely within my control.</p>	Source: (Ajzen, 1991, 2002, 2006).
ATT	<p>ATT1. I believe that my participation in government-led e-Participation initiatives through Facebook is a good idea.</p> <p>ATT2. I believe that my participation in government-led e-Participation initiatives through Facebook is a wise idea.</p> <p>ATT3. I believe that my participation in government-led e-Participation initiatives through Facebook is a worthwhile idea.</p>	Sources: (Ajzen, 1991, 2002, 2006).
BI (Intention to Participate)	<p>BI1. I expect that I would engage in government-led e-Participation initiatives through Facebook.</p> <p>BI2. I intend to engage in government-led e-Participation initiatives through Facebook.</p> <p>BI3. It would be very likely that I will engage in government-led e-Participation initiatives through Facebook in the near future.</p>	Sources: (Ajzen, 1991, 2002, 2006).

4.7.3 Questionnaire Translation

The original version of the questionnaire was written in the English language. Given the facts that (i) English is not the first language of Jordan (majority of Jordanian communicate in Arabic Language), (ii) Jordan was ranked as very low English proficiency when placed at 62 position of 72 worldwide countries, according to the recent report of English Proficiency Index (English Proficiency Index, 2016), (iii) Jordanians are still facing serious challenges of learning English language (Alhabahba et al., 2016), and 90% of Jordanian are using an Arabic version of Facebook (Arab Social Media Report, 2017), it is expected that target respondents of this study might face difficulty of understanding the English questionnaire statements or questions, what might affect the desirable response rate, as well as the quality of gathered data (De Vaus, 2013; Dillman et al., 2014; Sekaran and Bougie, 2010; Zikmund et al., 2013). According to Sekaran and Bougie (2010) and Zikmund et al. (2013), it is fundamental to use the language that makes

questions easier for the respondent to be clearly understood and to be answered. Therefore, the questionnaire was translated to Arabic language.

The study questionnaire has been translated into Arabic language by the author of this research work whose native language is Arabic. The accuracy of translation was also refined and verified by a professor at Faculty of Business of Al Balqa' Applied University. The both versions, English and Arabic, of the questionnaire were made available, so that each participant can choose his/her preferable and most comfortable version.

4.7.4 Online Survey Questionnaire

After the study survey questionnaire has been developed, validated, and translated, the next step was to determine how to deliver it to the potential respondents (survey modes).

Generally, there are four dominant survey modes: mail survey, telephone survey, paper-based survey, and online survey (De Vaus, 2013; Dillman et al., 2014; Sekaran and Bougie, 2010; Zikmund et al., 2013). Nowadays, online survey is the fastest evolving, developing, and extending survey modes among researchers in various research areas, field and disciplines (Babbie, 2015; Groves et al., 2009; Zikmund et al., 2013). In IS research, for example, it becomes prominent and an increasing number of IS studies was conducted using online surveys (Abareshi and Martin, 2009). Generally, if it fits with the needs of research, online survey achieves comparable advantages and probably could gain a high response rate from participants over the other survey modes (Babbie, 2015; Evans and Mathur, 2005; Fan and Yan, 2010; Greenlaw and Brown-Welty, 2009).

- **Justifications of Online Survey**

Online surveys provide several unique advantages in several ways that include, but are not limited to:

- 1) Online survey is considered a very valued and suited tool when a study (i.e., as is the current study), seeks a wide geographic coverage of population. Online survey can be also efficiently administered regarding dedicated effort and time, allowing an easy distribution of the questionnaire and minimizing the time needed to get the survey to the field and the time of having the collected data (Evans and Mathur, 2005).

- 2) Online survey is a very effective mode concerning an automatically data storage, data coding, and data analyzing. It also increases researcher's capability to design more interesting and more user-friendly questionnaire (Dillman et al., 2014; Evans and Mathur, 2005; Greenlaw and Brown-Welty, 2009; Zikmund et al., 2013).
- 3) Online survey seems to be particularly significant through eliminating the item non-response error (item non-response error refers to missing responses to individual questions), because the online survey could be easily constructed so that the respondent must answer a question before advancing to the next question or completing the survey (Dillman et al., 2014; Evans and Mathur, 2005; Greenlaw and Brown-Welty, 2009; Zikmund et al., 2013).

In Jordan, 73.6% of Jordan population have internet access and 5,700,000 are internet users (Internet Usage Statistics, 2016). 84% of them access the internet every day, which implies that internet usage is a daily activity for the majority of Jordanians (Poushter, 2015). An online survey will then be an even more valued tool to obtain responses from citizens living in different parts of the country. Therefore, these comparative advantages of the online survey make it a promising and favorable tool for collecting data for the current study.

- **Google Online Survey**

The questionnaire was prepared using Google survey forms since Google survey forms could be easily disseminated in a manner in which respondents will be easily access and respond (Greenlaw and Brown-Welty, 2009). Google survey forms are able to be used with many generations of web browsers on any device. This ability might reduce technical problems related to the compatibility of browsers and devices used by respondents, and minimize a download time for accessing a survey website, thereby increasing response rates (Dillman et al., 2014; Evans and Mathur, 2005). Google forms is mobile-friendly. A report by Pew Research Center survey in 2015, which was conducted among 40 nations, finds that 51% of Jordanian adults (above 18 years) own a smartphones comparing to 41% just one year before in 2014 (Poushter, 2015). The features highlighted before clearly demonstrate the high ability and capability of Google forms survey to gain more respondents.

- **Structure of Online Questionnaire**

The final questionnaire consisted of eight sections, as depicted in Table 9. **Section one** briefly introduces the study topic and objectives. Such introduction was very important as respondents may have no or less awareness of what government-led e-Participation initiatives through Facebook mean. **Section two** solicits demographic and personal information of participant. This section includes 11 items (i.e. age, gender, education, current job, place of living, duration of Facebook membership, and stay length on Facebook).

Table 9: Structure of the Online Survey Questionnaire

SECTION	SECTION TITLE	SECTION ITEMS DESCRIPTION	ITEMS
Section 1	Electronic Participation through Social Media: Citizens' acceptance Factors at Local Government Level	Introduction and preface of the study	—
Section 2	Personal information	Personal information (i.e., age, gender, education, current job, place of living, duration of Facebook membership, and stay length on Facebook)	8 items
Section 3	Opinion about Facebook	Perceived of Use	3
		Perceived Usefulness	3
		Compatibility	3
		Trust	4
			13 items
Section 4	The Local Government	Trust in local government	4 items
Section 5	Freedom to participate, and Participation Efficacy.	Freedom to participate in Jordan	3
		Participation Efficacy	4
		Social norms	3
		Perceived Behavior of Control	3
			13 items
Section 6	Impact of Government-led e-Participation Initiatives through Facebook	Perceived benefits of Government-led e-Participation Initiatives through Facebook.	7
		Ability and commitment of local governments to coordinate e-Participation Initiatives through Facebook	4
			11 items
Section 7	Attitude Toward Engaging in Government-led e-Participation Initiatives through Facebook	Attitude to engage in government-led e-Participation initiatives through Facebook.	3
		Intention to engage in government-led e-Participation initiatives through Facebook	3
			6 items
Section 8	Conclusion of the survey	Thankfulness for concluding the survey and request any participant feedback, comments, or questions.	
Total number of Items			54

For some rational reasons, Zikmund (2013) suggests that questions seeking highly sensitive information (i.e., details of income, health status) are best placed at the very end of the questionnaire (Zikmund et al., 2013). However, others say it is a matter of choice for the researcher to place such questions at the end or the beginning of the questionnaire (Sekaran and Bougie, 2010), and some research found that when those data are requested at the beginning, fewer drop-outs occurred (Frick et al., 1999). As the questions are not asking a highly sensitive or very private information (for example, there are no questions in the survey seeking details of income), personal and demographic questions were placed at the beginning of the questionnaire. **Section three** explored participant's opinion on Facebook. In this section, the participant was presented with 13 statements addressing his/her attitude toward using Facebook. Those statements cover several issues related to the use of Facebook such as perceived of use, perceived usefulness, compatibility, and trust. **Section four** presents four statements addressing participant's opinion about the local government (Municipality). **Section five** presents 13 statements addressing participant's perception about freedom to participate (measured by the freedom level of speech level and freedom of expression in Jordan), participant judging of his/her participation efficacy capability, perception of the effects of social norms, and participant generally evaluation of the level of his/her control on his/her behavior. **Section six** deals with participant's opinion about the perceived and expected benefits of government-led e-Participation initiatives through Facebook (seven items). It also addresses participant's perception of the ability and commitment of the local governments to coordinate and manage e-Participation initiatives through Facebook (four items). **Section seven** investigates participant's attitude and intention to engage in government-led e-Participation through Facebook initiatives (6 items). **Section eight** concludes the survey by providing greatest thankful for participating and asking any feedback, comments, or questions.

- **Facebook as Digital Courier**

In the current age of social media, many opportunities seem fruitful in what concern how researchers can benefit from those platforms to advance their academic works (Kosinski et al., 2015). Those opportunities might be shaped through an aspect of promoting and advertising studies, or through recruiting suitable sample for both online and offline studies (Baltar and Brunet, 2012; Branthwaite and Patterson, 2011; Kosinski et al., 2015).

As the number of Facebook users increases, we can expect that a greater percentage of sample members who are willing and able to respond would be on Facebook. In fact, the study sample respondents should be Facebook users. Therefore, Facebook applied to the current study since it can be beneficial in different ways:

- 1) Facebook is a useful mean to identify hard to reach population, expand sample size (Baltar and Brunet, 2012) and run surveys faster within lowest cost (Bhutta, 2012).
- 2) Facebook can minimize some barriers associated with online survey techniques to collect data, particularly the lack of representatives. While online survey population is criticized for being not perfectly representative of the real population, in due of losing participants who do not have an internet access, as well as in due that internet user population is more likely to be the richer, well educated, and younger (Fan and Yan, 2010). During the last few years, Facebook population is tending to be more representative as more society members are in Facebook (Kosinski et al., 2015).

The survey invitation plan was basically based on publicizing the survey through Facebook advertisement services. An advertising campaign to reach different audiences was organized. The survey invitation posts were advertised through Facebook considering the study budget. The campaign has targeted Jordanian citizens on Facebook and the survey was available for 21 days started on 4 November 2016. Figure 7 shows one post that we have advertised. The post in Figure 7 says: *"Your opinion is very important to me and certainly, will make a difference. Please click on the link to take part in the questionnaire: "Jordanian citizens' attitude toward the involvement in electronic participation initiatives through Facebook - that is implemented and operated by local governments". Ayman Alarabiat. PhD Student"*.



Figure 7. Example of Advertised Post

4.8 Study context

The current study has been conducted in Jordan and has used Facebook network as a representation of other social media networks. This section states several rational reasons behind these two decisions.

4.8.1 Jordan

In terms of context, Jordan represents an interesting case for this study for many reasons.

1) Jordan is an Arab country and in those countries the internet users have grown at about 20% annually, which is faster than the world average growing rate, according to the Arab world online report released in 2013 (Arab Social Media Report, 2013). Facebook is still the top used social media networks in the Arab world with around 156 million users as of January 2017, up from 115 million in 2016 (Arab Social Media Report, 2017).

In Jordan, more than 90% of Jordanian internet users are social networkers, specifically of Facebook, meaning that 66% of the population of Jordan has Facebook accounts, according to several reports by Pew research center (Poushter, 2015)⁷ and Mohammad bin Rashid School of Government (Arab Social Media Report, 2015, 2017). More importantly, 90% of Jordanian Facebook users are logging their Facebook account on daily basis (Arab Social Media Report,

⁷ Pew Research Center survey was conducted in 40 nations among 45,435 respondents during 25 - 27/5/2015.

2015; Poushter, 2015), which mean that more than 3 million Jordanian are on Facebook at least once a day, and they spend in average 15 minutes per visit, according to Alexa statistics⁸. Based on such figures, Jordan has the third most active population on Facebook in Arabic region, according to the report. This is very important when assessing feasibility of engagement mechanisms (by governments or businesses) across social media platforms (Arab Social Media Report, 2017).

2) Whilst the increasing usage of internet and social media in the Arab regions have provided key foundations for governmental service delivery initiatives, and having numerous positive aspects that enhance the quality of governmental interaction with citizens, governments in Arab countries are clearly still lagging behind in building on these foundations (Arab Social Media Report, 2014, 2015). Generally, only 1% of Arab citizens use government services applications frequently (Arab Social Media Report, 2014).

In Jordan, lack of citizens awareness of e-Government has been found as among the core reasons behind the low success of e-Government projects (Al-Jaghoub et al., 2010; Al-Shboul et al., 2014; Bataineh and Abu-Shanab, 2016; Kanaan and Kanaan, 2013). Recently, based on the Jordan Strategy Forum, 20% of Jordanians are unaware of the e-Government services available, and around 48% of them have never used an e-Government services (Ghazal, 2016)⁹. A study by Al-Hujran et al. (2015) found that only 42.4% of their study respondents were adopters of e-Government information and services, while the remaining (57.6%) were non-adopters. Similarly, a recent study of Abu-Shanab and Al-Dalou (2016) has found that 65% of Jordanian did not use the Jordanian e-Government website. Moreover, a recent pilot study has found that approximately two-thirds of Jordanian had not realized that the Jordan e-government have a Facebook page (Khasawneh and Tarawneh, 2016).

Clearly, Jordanian government faces major challenges over implementing an effective e-Government project including e-Participation initiatives. In fact, e-Participation initiatives are still humble, with limited citizens' involvement in those initiatives through official e-Government

⁸ <http://www.alexa.com/topsites/countries/JO> (accessed February 2017).

⁹ <http://www.jordantimes.com/news/local/48-jordanians-have-not-used-e-gov%E2%80%99t-services%E2%80%99>

website. (Abu-Shanab and Al-Dalou, 2016; Al-Quraan and Abu-Shanab, 2015; Bataineh and Abu-Shanab, 2016; Khasawneh and Tarawneh, 2016).

3) Regarding Jordan e-Participation rank in the world wide comparative ranking presented by the United Nation e-Participation index (EPI), it is evident that major efforts are required to improve Jordan status in the e-Participation domain, as we discuss next.

The UN Department of Economic and Social Affairs' (UNDESA) produce an E-Government Survey report every two-year. The report provides a comparative ranking of the world countries according to their e-Participation index (EPI). EPI shows the extent to which countries have offered e-Participation tools for the purposes of three e-Participation levels: (i) information provision, (ii) citizen consultation, and (iii) decision-making. EPI indicates to which extent such tools were available at each of the three e-Participation levels.

Based on UN EPI Index, Jordan ranked 98th place globally in 2016 dropping from 71st place in 2014, as Figure 8 shows. In 2014, Jordan was made a significant improvement by 30 places compared to 2012 when it was ranked at 101st place. Jordan also had the greatest move upwards from being ranked 90th in 2005 to 15th in 2008, put in place enhanced national portals which include features that increase citizen engagement. Obviously, the period of 2008-2012 represents the hardest time for country ranking when Jordan sufficiently has dropped and took lower positions of 193 countries worldwide.

Until 2013, Jordanian government did not have a well-defined strategy, program, or mechanisms that make e-Participation a receptive concept in the Jordan e-Government strategy. Briefly, Jordan e-Government program was launched in 2001 and proposed four strategies for the development and the implementation of e-Government in Jordan through the years (2003–2006), (2006–2009), (2010–2013), (2014–2016) (Majdalawi et al., 2015).

The latest strategy of e-Government in Jordan (2014–2016) has clearly stated that Jordanian government is committed to creating an environment that empowers citizens to be more involved with government activities and to have a voice in government decision-making (Jordan E-Government, 2013). The strategy strongly called to solicit citizens' opinion and feedback through interactive tools such as social media networks, discussion fora, web blogs,

live chat, polls and surveys. Unfortunately, Jordanian e-Government page on Facebook has removed an option for messages that allow citizens to contact them.

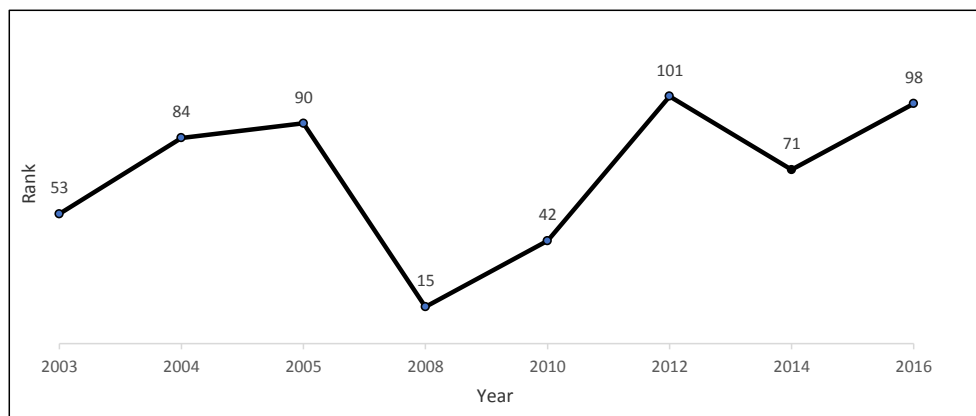


Figure 8. E-Participation Development World Ranking for Jordan
(adapted from related UN reports – 2003, 2004, 2005, 2008, 2010, 2012, 2014, and 2016 – and related studies such as (Kanaan and Kanaan, 2013; Majdalawi et al., 2015))

As Figure 8 shows, it cannot be concluded that such strategies made a significant improvement of Jordan EPI ranking. The country ranked 98th in 2016, having improved only two ranks as in 2012 when the country ranked in 101st position. Knowing this, further works and efforts need to bring Jordan to lead among Arabic countries and improve its status in the e-Participation index.

4) Although there is a growing evidence of online discussions revolving around public, civic, and political affairs or topics on social media platforms in Jordan rather than on government official websites (Mishaal and Abu-Shanab, 2015), studies in the context of e-Participation through social media are still limited in Jordan (Abu-Shanab and Al-Dalou, 2016; Btoush, 2014; Khasawneh and Abu-Shanab, 2013),. Accordingly, the Jordanian e-Participation project is still in blurry and infant phase so far, and as Hwang (2008) argues, that gives a significant opportunity to watch and monitor from early stages.

5) According to the International Republican Institute (IRI) surveys of Jordan public opinion, Jordanians believe that they do not have a part in government decisions of issues that affect them. IRI surveys, starting with the first survey conducted in July 2005 in Jordan, have been examining Jordanians' attitudes on national priorities, political reform, electoral politics and local governance. Table 10 was done based on both latest IRI surveys 2015 and 2016. According to the table, 64% of Jordanian citizens believe that do not have a voice in government

decision-making issues that directly affect them. This reflects a significant frustration and disappointment over the IRI's 2015 poll when 53% believe that do not have a say in government decision-making. Furthermore, 48% of them believe that things are going somewhat or mostly in the wrong direction in Jordan, compared to (26%) in 2015 (The International Republican Institute, 2015, 2016).

Table 10. IRI'S Survey of Jordan Public Opinion

ITEMS	2015 IRI's POOL		2016 IRI's POOL	
	Classification		Classification	
To what degree citizens have a say in governmental decision-making on issues that directly affect them	large and moderate degree	little degree to not at all degree	large and moderate degree	little degree to not at all degree
Percentage	47%	53%	36%	64%
Overall, if Jordan headed in the right direction or the wrong direction.	somewhat or mostly right	somewhat or mostly wrong	somewhat or mostly right	somewhat or mostly wrong
Percentage	64%	26%	52%	48%

6) Jordan has very limited natural resources realized the importance of governance initiatives. Such limitation has made the country looking for alternative sources, particularly ICT practices, to support the social and economic progress rapidly as well as its government operations. Unfortunately, it seems that was until 2008. That is, based on UN E-government development Index value (EGDI) surveys 2004-2016, Jordan had good moves upwards from being ranked 68th in 2004 to 50th in 2008, as shown in Figure 9. However, like the significant dropping in EPI index, Jordan continues to drop through the years 2008–2016 when the country finally ranked at 91st place in 2016 from 50th place in 2008, according to EGDI.

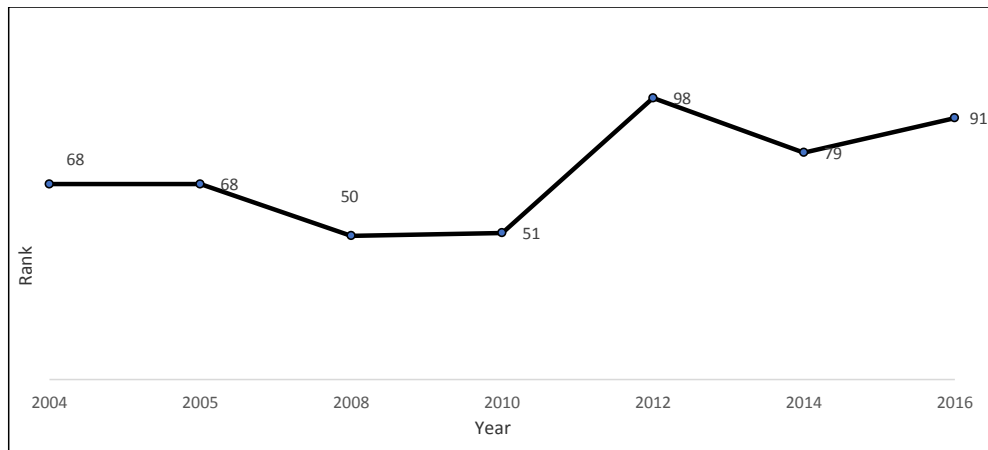


Figure 9. E-government Development World Ranking for Jordan

(adapted from related UN reports – 2003, 2004, 2005, 2008, 2010, 2012, 2014, and 2016 – and related studies such as (Kanaan and Kanaan, 2013; Majdalawi et al., 2015))

Now, more than fourteen years later, the Jordanian e-Government project do not produce a huge tangible success and still falls predominantly within the informational stage; transaction stage is not fully utilized yet (Abu-Shanab and Baker, 2011; Alomari et al., 2012; Kanaan and Kanaan, 2013; Majdalawi et al., 2015; United Nations, 2014, 2016).

Although of previous stated plans and strategies to support and enable the adoption and implementation of e-Government in Jordan, the rate of citizens' awareness, acceptance, adoption, and implementation of e-Government services is still low. Citizens' awareness and readiness is one of the major challenges faced by e-Government in Jordan, where most of them were not informed and guided properly on such implementation (Kanaan and Kanaan, 2013; Majdalawi et al., 2015). Several studies found that awareness of e-Government by citizens in Jordan did not reach the required level (Al-Jaghoub et al., 2010; Al-Shboul et al., 2014). Social media can play a significant role in increasing Jordanian's awareness about e-Government programs and services (Alomari, 2014; Khasawneh and Abu-Shanab, 2013).

4.8.2 Facebook

This study has used Facebook as a representation of other social media networks for the following reasons:

1) Facebook is undeniably popular. Facebook celebrated its twelfth birthday in 2016 with being as central part of daily life for around 1.8 billion people worldwide, which make it the

largest and most popular social media platforms, according to Facebook company statistics (Facebook news room <http://newsroom.fb.com/company-info/>)

2) It would not be far from the truth to state that Facebook has exhibited an exponential penetration into the interaction between governments and citizens (Mergel, 2012b; Mossberger et al., 2013). Recently, Facebook becomes a natural way that governments have adopted as a primary way to listen and communicate with citizens. Over the past years, Facebook becomes an essential and the most prevalent social media platform used by governments around the world (United Nations, 2014, 2016). According to the two latest UN reports (2014 and 2016), Facebook is the most social media platform used by governments (United Nations, 2014, 2016). Additionally, Facebook is the major communication technology platform between local governments and citizens in developed countries, particularly in Europe and the USA (Bonsón et al., 2012, 2015; Guillamón et al., 2016; Norris and Reddick, 2013; Norström and Hattinger, 2016). Nowadays, many government-led e-Participation initiatives have been linked to Facebook networks (Bonsón et al., 2015; Hofmann et al., 2013; Mossberger et al., 2013; Oliveira and Welch, 2013).

3) Around 86% of social media users in the Arab region use Facebook to express their views or regarding their government's policies. Only 28% of them use Twitter to do so.

4) In Jordan's social media sphere, Facebook dominates over other social media platforms such as Twitter, Instagram, Google +, etc. (Arab Social Media Report, 2015; Poushter, 2015). Facebook is the most preferred social media network for Jordanian, where around 90% of social media users are on the site. Approximately, 93% of Jordanian Facebook users access it at daily base (Arab Social Media Report, 2015; Poushter, 2015).

Facebook in Jordan has witnessed a massive rise in its adoption and usage within the last few years, with around 4,800,000 Facebook subscribers for June 30th, 2016, those represented nearly 62% of 7,747,800 Jordan population (Internet Usage Statistics, 2016). Facebook has attracted around 1,685,000 new Jordanian users between 2014 and 2017 according to the latest Arab social media report (Arab Social Media Report, 2017). Simultaneously, there are only 26,000 new Twitter users. The report also shows that only 2% of Jordanian has Twitter account. The largest two age groups currently using Facebook are those between 18 to 24 and 25 to 34

years old, those groups represented about 35% and 29% of all Facebook users respectively (Arab Social Media Report, 2015). Overall, around 61.4% are under 30 years 30 years (Arab Social Media Report, 2017).

5) The current study considers the previous research conclusions that each social media network may induce what can be called “site-specific culture” (Dwyer et al., 2007; Pasek et al., 2009; Zhou, 2011). Social media site-specific culture implies that the different types of social media networks may identify with different characteristics of users, intentions, purposes, and behaves. Users of specific social media networks may tend to behave differently of others who using another social media. Thus, we should not assume that all online behaviors and cognitions are the same across various social media networks.

For instance, a recent study which tests if and how social media usage (Twitter) affects perceived police legitimacy (Grimmelikhuijsen and Meijer, 2015), the authors declare that each of other social media platforms, such as Facebook or YouTube, have some distinct characteristics that affect how citizens receive information and/or interact with police. Which mean that different forms of outcomes can be associated with different functions and facilitates of social media. Another example, a study of (Pasek et al., 2009) found that the users of Facebook might have greater political knowledge and be more interested in civic engagement rather than those users of another social media networks, e.g., My Space social networks. The study also demonstrated that the users of My Space were less trusting of others members in the networks. Dwyer et al., (2007) previously found that Facebook members expressed significantly greater trust in both Facebook and its members, and were more willing to share identifying information than My Space members (Dwyer et al., 2007). Generally, and comparing with other social media networks, the users of Facebook tend to behave more reliable (Dwyer et al., 2007; Zhou, 2011).

Additionally, the trust in a specific form of technologies differs and distinct from trust in other forms of technology (Mcknight et al., 2011). Thus, we do not expect that user trust of social media networks is the same. User trust in Facebook for example may be more or less than his/her trust in Twitter. So, trust difference will affect user’s behaviors on that networks.

Based on the above reasons, it becomes more rational that each social networks must be examined separately with its unique users or “ its population” (Pasek et al., 2009). Therefore, we consider that Facebook provides an ideal institutional setting for the study.

4.8.3 Study Population and Sample

The study followed several steps to ensure a good sampling design for gathering the needed data, namely: 1) define population, 2) determine sampling frame, 3) select sampling technique, 4) determine sample size, and 5) execute the sampling process (Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013). Following paragraphs briefly describe these steps.

The population of this study consisted of Jordanian citizens using Facebook. Those were selected as the survey population since they were or would be the main users when government-led e-Participation through Facebook are more extensively implemented and/or when they become aware of such initiatives.

A quantitative research requires a sufficient sample size in order to conduct meaningful and defensible statistical tests (Creswell, 2013; Leedy, 1993; Sekaran and Bougie, 2010; Zikmund et al., 2013). Two major important standards in selecting a sample are: (i) sample selection should be large enough to give more accurate information to keep the margin of error within acceptable limits, and (ii) the selected sample should be representative of the study population (Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013). Careful selection of a study sample from the general population based on those two standards will enable researchers to conduct more precise statistical analysis in order to verify and test proposed relationships and hypotheses. Additionally, it is very important to produce an accurate conclusion and to generalize the study findings to the whole population. As a rule of thumb, if the sample is not large enough, the study will produce imprecise findings; and, if the sample is not representative of the population which it is taken from, that will introduce bias into the study.

For the first standard (suitable size of the sample), previous prominent research methods publications (Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013) have offered rough guide about different minimum sample sizes required from different sizes of population given a per cent confidence level for different margins of error. The researchers

provide guidelines including tables for sample size decisions for a given population size (Saunders et al., 2011, p. 219; Sekaran and Bougie, 2010, p. 295 and 296; and Zikmund et al., 2013, p. 437). Based on that, the sample size was set so that to ensure the margin of error of the survey findings does not exceed 5% (margin of error is also called confidence interval) at the 95% confidence level. At the 95% confidence level, the minimum sample to ensure the margin of error is less than 5% from 4.8 million Facebook subscribers in Jordan would be at least 384 (Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013).

Regarding the second standard (sample representative of the study population), the selected sample should contain as possible the similar segments or groups that compose the whole population. A good representative sample would be achieved when it exactly or at least relatively represents the population of interest. Therefore, researchers should devote more efforts to not exclude any particular groups, either by the method of sampling or by deciding who are invited to participate. Otherwise, when specific segment in the target population is under or over represented in the sample, sampling bias arises. As a general assumption, as more a sample exactly reflects and represents the target population, stronger conclusions and more accurate generalization could be drawn about the nature of the population.

In the current study, best efforts were devoted to target all segments of the study population, looking and hoping that citizens who will respond to the questionnaire will be quite representative of all citizens, including those who did not respond. The best sampling technique to achieve that aim is adopting probability sample technique. Probability sampling is a sampling technique wherein the samples are gathered in a process that gives all the individuals in the population equal chances of being selected (Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013).

Accordingly, this study targeted various Jordanian Facebook users' groups. The survey invitation to the whole target population, and reach more citizens as much as to give them all the chance to participate. Ultimately, this will enhance the study external validity and improved the ability to generalize the findings to the whole population.

4.9 Study Design Summary

The study considered TPB as an adequate theory to ground the study and expanded it to be applied to the e-Participation context. The methodological approach is primarily based on TPB. Consequently, the chapter presents a theoretical citizen-centric model that seeks to explain and predict the intention of citizens' behavior towards their involvement in government-led e-initiatives through Facebook. The model applies the main constructs of the theory (ATT, SN, and PBC), and extended by several constructs drawn from relevant literature: PV, PE, PEOU, PU, COMP, CT_FB, CT-GOV, and FC. Based on the analysis provided in this chapter, the hypotheses were presented and discussed. The relationships and the corresponding references of hypotheses are depicted in Table 11.

The chapter described and justified the using of quantitative research approaches in this study, along with the outlines relevant reliability and validity underlying assumptions. For reliability, will be ensured through the calculation of Cronbach's α . As for validity, it will be asserted through content validity; construct validity (include convergent validity and discriminant validity); and design validity (include internal and external validity).

The process of development and validation of the study online questionnaire survey was described. The questionnaire was built on Google survey, pre-tested, and then it has been promoted, and disseminated through Facebook. The study population consisted of Jordanian citizens using Facebook and a probability sampling technique was used for collecting data.

Next chapter presents the quantitative data analyses, including descriptive results and the data analyses to test the study hypotheses.

Table 11. Hypotheses and Supporting Studies

PATH	HYPOTHESES	SUPPORTING STUDIES
AT→BI	H1. <i>Attitude of citizens towards the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.</i>	(Al-Debei et al., 2013; Al-Hujran et al., 2014, 2015; Davis, 1989; Hung et al., 2013; Osorio and Papagiannidis, 2014; Ozkan and Kanat, 2011; Rana et al., 2012)
SN→BI	H2. <i>Subjective norms of citizens in relation to the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.</i>	(Al-Debei et al., 2013; Al-Hujran et al., 2014; Hung et al., 2013; Osorio and Papagiannidis, 2014; Rana et al., 2012)
PBC→BI	H3. <i>Perceived behavior control of citizens in relation to participation engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook</i>	(Al-Debei et al., 2013; Al-Hujran et al., 2014; Hung et al., 2013; Osorio and Papagiannidis, 2014; Ozkan and Kanat, 2011; Rana et al., 2012; Taylor and Todd, 1995)
PV→BI	H4. <i>Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's intentions to participate in government-led e-Participation initiatives through Facebook.</i>	Derived from (Cronin et al., 2000; Triandis, 1980; Zeithaml, 1988)
PV→ATT	H5. <i>Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's attitude to participate in government-led e-Participation initiatives through Facebook.</i>	(Al-Hujran et al., 2015; Nam, 2012a; Wang, 2014).
PE→BI	H6. <i>Higher level of citizens' participation efficacy positively affects their intentions to participate in government-led e-Participation initiatives through Facebook.</i>	(Alathur et al., 2016; Gastil and Xenos, 2010)
PE→ATT	H7. <i>Higher level of citizens' participation efficacy will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.</i>	
PE→PV	H8. <i>Higher level of citizens' participation efficacy will be positively related to higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook.</i>	

PEOU→ATT	H9. Higher levels of perceived ease of use of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.	Derived from (Benbasat and Barki, 2007; Carter and Bélanger, 2005; Moore and Benbasat, 1991; Rogers, 1995; Taylor and Todd, 1995)
PU→ATT	H10. Higher levels of perceived usefulness of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.	
COMP→ATT	H11. Higher levels of Facebook compatibility will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.	
PEOU→PV	H12. Higher levels of perceived ease of use of Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.	Derived from (Davis, 1989; Delone and McLean, 2003; Macintosh and Whyte, 2008)
PU→PV	H13. Higher levels of perceived usefulness of Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.	
COMP→PV	H14. Higher levels of Facebook compatibility will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.	
CT_FB→ATT	H15. Higher levels of trust on Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.	(Al-Hujran et al., 2015; Carter and Bélanger, 2005; Osorio and Papagiannidis, 2014; Ozkan and Kanat, 2011; Scherer and Wimmer, 2014; Titah and Barki, 2006) (Al Hujran et al., 2013; Nam, 2012a)
CT_GOV→ATT	H16. Higher levels of citizens' trust in local government will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.	
CT_FB→PV	H17. Higher levels of trust on Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.	
CT_GOV→PV	H18. Higher levels of citizens' trust in local government will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.	
FC→PBC	H19. Facilitating conditions in relation to participation in government-led e-Participation initiatives through Facebook positively affects citizen Perceived behavior control.	(Hung et al., 2013; Rana et al., 2012)

5 . CHAPTER FIVE: STUDY RESULTS

5.1 Introduction

This chapter presents results obtained from the data analysis of the survey questionnaire that was conducted to examine citizens' intention to engage in government-led e-Participation initiatives through Facebook in Jordan. The data was analyzed by statistical techniques using the SPSS (Version 22) to test the overall fit of the model, validity and reliability as well as to test the structural model and the study hypotheses.

This chapter is structured as follows. Section 5.2 describes the demographic characteristics of the study sample by using frequency distribution techniques. Section 5.3 judges two parametric assumptions: normality and adequacy of the study sample. It briefly discusses the sample's appropriateness and assess sampling adequacy for running factor analysis. Descriptive analysis was conducted estimating the values of mean (M), standard deviation (SD), standard error of the mean (SE), skewness, and kurtosis for each response and used to determine the normality of the study sample. Furthermore, Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test was used to determine the sample's appropriateness and adequacy. Section 5.4. ascertains the validity and reliability. While Cronbach's Alpha was used to check the reliability of the data measured, factor analysis using principle components (Factor Loading, CR, and AVE as have been explained in Section 4.6) were used to evaluate construct validity; convergent and discernment validity. Section 5.5 summarizes descriptive analysis of the study constructs. Section 5.6. presents the results of regression analyses and hypotheses testing. Finally, Section 5.7 summarizes the study results.

5.2 Sample Characteristics

The study sample size obtained is (400) respondents. A sample size of 384 respondents was deemed appropriate for empirical research purposes, as stated earlier. In the following, the demographic characteristics of the study sample participants are outlined. Those characteristics include participants gender, age, education, current job, living place and living region in Jordan, Facebook membership duration and average time spent in Facebook per day. The sample demographics are shown in Table 12.

Table 12. Sample Characteristics

CHARACTERISTICS	FREQUENCY	PERCENTAGE (%)
Gender		
Male	253	63.2
Female	147	36.8
Age		
< 17 years	4	1.00
18-24 years	103	25.8
25-34 years	145	36.3
35-44 years	101	25.3
45-54 years	34	8.5
55-64 years	11	2.8
65 years and older	2	0.5
Highest educational degree completed or currently enrolled		
Secondary school degree or lower	47	11.8
Diploma degree	30	7.5
Bachelor degree	246	61.5
Master degree	59	14.7
Doctorate degree	18	4.5
Current Job		
Student	82	20.5
Employee (Public sector)	92	23.0
Employee (Private sector)	104	26.0
Self-employed	34	8.5
Military forces	17	4.2
Retired	14	3.5
Unemployed	57	14.3
Current place of living in Jordan		
City	286	71.5
Town	21	5.3
Village	41	10.3
Camp	1	0.3
Currently, not living in Jordan	48	12.0
Badia (desert areas)	3	0.8
Living region in Jordan		
Northern region (Irbid, Jerash, Ajloun, Mafraq)	64	16
Central region (Amman, Zarqa, Balqa', Madaba)	259	64.8
Southern region (Karak, Tafila, Ma'an, Aqaba)	43	10.8
Currently, not living in Jordan	34	8.5
Facebook membership duration (years)		
Less than a year	7	1.8
Approximately from 1 years to 2 years	14	3.5
Approximately from 2 years to 3 years	26	6.5
Approximately from 3 years to 4 years	45	11.2
Approximately from 4 years to 5 years	54	13.5
Approximately from 5 years to 6 years	68	17.0
Over 6 years	186	46.5
Average time spent in Facebook per day		
Less than 30 minutes	35	8.8
30 to 60 minutes	80	20.0
1 hour to less than 2 hours	108	27.0
2 hours to less than 3 hours	57	14.3
More than 3 hours	120	30.0

Table 12 shows that 63.2% of the respondents were males and 36.8% were females. In terms of age, the results revealed that the largest percentage of respondents were in the age group of 25-34 years (36.3%), followed by the two age groups of 18-24 years and 35-44 years, constituting around 25.8% and 25.3% of the total respondents respectively. Whilst the age group 45-54 consisted of 8.5%, the age group 55-64 comprised of 2.2% of the total respondents. Additionally, it is interesting to find that around 11.8% of respondents were over 45 years old. Overall, most respondents were in the range of 18-44 years. Of the respondents, in terms of educational backgrounds, the majority of respondents (61.5%) hold bachelor degrees. While 14.7% hold master degree and 4.5% hold doctorate degree, 19.3% hold diploma and secondary school certificates or below.

When examining the current job of the respondents, 49% were employees in public and private organizations, 8.5% were self-employed, and 4.2% were militaries. While university/high school students comprised of 20.5% of the total respondents, 14.3% were unemployed, and 3.5% were retired. Such results confirm the diversity of the study sample.

In terms of the current place of living, Table 12 shows that most respondents (71.5%) were living in cities and 10.3% were in villages. While 12% of the survey respondents were not living in Jordan, 5.3% were living in towns, 0.8% in Badia (desert areas), and 0.3% in camps. Concerning respondent's living region in Jordan, the largest category of respondents (64.8%) were from central region of Jordan, which includes 4 governorates; Amman (the capital), Zarqa, Balqa', Madaba. This category followed by 16% of respondents who were from northern region, which includes 3 governorates; Irbid, Jerash, Ajloun, Ma'raq). In addition, 10.8% of respondents were from southern region, which includes 4 governorates; Karak, Tafila, Ma'an, Aqaba. Finally, 8.5% of respondents were not living in Jordan. Clearly, most participant were from central region in Jordan. This was expected since that majority of Jordan population live in central region of the country.

In terms of Facebook experience, the results revealed that 46.5% of respondents were found in the Facebook experience group over 6 years. This was followed by the Facebook experience group of 5-6 years, constituting 17% of the total respondents. The Facebook experience group of 4-5 years and 3-4 years, constituted 13.5% and 11.2% respectively. The Facebook experience group of 2-3 years were around 6.5%. In contrast, the groups with the least

Facebook experience (1-2 years and less than a year) together consisted of 5.3% of the total respondents. Overall, most of Jordanians (88.2%) are Facebook users for more than 3 years. Such results assert Facebook popularity among Jordanians

Regarding time spent on Facebook site per day, 30% of respondents often spend more than 3 hours per day on Facebook. This was followed by 27% of respondents who spend 1-2 hours per day. While those who used to spend 2-3 hours comprised 14.3% of the total respondents, 20% spend between 30 to 60 minutes and 8.8 % of the total respondents mentioned that they often spend less than 30 minutes on Facebook per day. Obviously, around 71.3% of respondents were spending more than an hour per day on Facebook.

5.3 Normality and Adequacy of the Study Sample

The process of checking whether the sample data obtained are suitable and appropriate for analysis is very critical to ensure the credibility of the findings. There are two key parametric statistical assumptions proposed - the normality and the adequacy of the study sample. Therefore, both statistical standards are discussed below.

5.3.1 Assessment of Data Normality

Normality concerns the shape of a sample data distribution and if a sample fits a standard normal distribution. Data points in a normal distribution are more likely to fall closer to the mean. In simple words, the data is normality distributed when the curve describing it looks like a bell shape. Normality is an essential prerequisite for successful regression analysis to ensure the validity and reliability of the results (Hair, 2009; Tabachnick and Fidell, 2007). The evaluation of normality could be examined by calculating the values of skewness, kurtosis, (SD), and standard error of the mean (SE). As a rule of thumb, the data set is considered to be normality distributed if the values of skewness, kurtosis, SD, and SE are closed to zero.

Skewness refers to the balance of distribution, and kurtosis indicates the height of the distribution. Briefly, skewness measures the degree of asymmetry of a distribution around its mean. If skewness value is positive, then the bulk of data are concentrated on the left of the distribution. Otherwise, when skewness value is negative, data are concentrated to the right of the distribution. The accepted values for skewness have been suggested within the range of \pm

2.58 at the 0.01 significance level ($p < 0.01$) (Hair, 2009; Tabachnick and Fidell, 2007). As Table 13 shows, skewness values for the study constructs are within recommended range. Further, it could be concluded that if skewness values are between -0.5 and 0.5, the distribution is approximately symmetric. For this study, as Table 13 shows, the skewness values of the study constructs are all within values range of -0.5 and 0.5, except the skewness values of PE (-0.60) and PEOU (-1.24).

Kurtosis shows the “flatness” or “peakedness” of the curve describing set of data (Hair et al., 2010). Positive kurtosis value indicates a peaked distribution, while negative kurtosis value indicates a flatter distribution (Hair et al., 2006). The accepted values for kurtosis have been suggested within the range of ± 2.58 at the 0.01 significance level (Hair, 2009; Tabachnick and Fidell, 2007). As Table 13 show, kurtosis values for the study constructs are within recommended range. The kurtosis values of the study constructs, shown in Table 13, are all within values range of -0.5 and 0.5, except the kurtosis values kurtosis for PBC (-0.53) and PEOU (2.03).

Based on the above, the data of current study is deemed to be normally distributed, which satisfies the normality condition of analysis (Hair, 2009; Tabachnick and Fidell, 2007).

Table 13. Descriptive Analysis and Normality Test of the Study Constructs

CONSTRUCT	MEAN	SD	SE	SKEWNESS	KURTOSIS
PEOU	4.19	0.04	0.80	-1.24	2.03
PU and COMP*	3.53	0.04	0.86	-0.24	-0.37
CT_FB	2.97	0.05	0.98	0.05	-0.60
CT_GOV	2.34	0.05	1.02	0.53	-0.30
PV	3.47	0.75	0.04	0.06	-0.30
SN	3.54	0.86	0.04	-0.15	-0.40
PE	3.90	0.80	0.04	-0.62	-0.03
FC	3.55	0.80	0.04	-0.50	0.44
PBC	2.81	1.05	0.04	0.20	-0.53
ATT	3.67	0.96	0.05	-0.47	0.18
BI	3.75	0.96	0.05	-0.32	-0.11

* Because PU and COMP loaded together, we combined them in one construct as will be explained in convergent validity section (5.4.2.1).

It terms of SD and SE, the values of both SD and SE as depicted in Table 13 indicates that the data are close to its mean (represented by a lower values of SD) and the study sample reflects the target population (represented by a lower values of SE). Concerning SD, a smaller

SD score indicates that the data are very close to its mean, so, a more accurate reflection of the entire data and less variance in the results. In statistics, for data with a normal distribution, about 68% of the values lay within $\pm 1SD$ of the mean, about 95% of the values lay within $\pm 2SD$ of the mean, and about 99.7% of the values lay within $\pm 3SD$ of the mean. As Table 13 shows, all SD values of the study constructs lay within $\pm 1SD$ of the mean, except PBC with $SD=1.05$.

Regarding SE which signifies how accurately a sample represents and reflects the wider population (target population). In statistics, SE is the deviation of a sample mean from the actual mean of a population. Lower values of SE of the mean indicate more precise estimates of the population mean. As Table 13 shows, all SE values either 0.04 or 0.05, except CT_GOV with $SE=1.02$. Such low values of SE suggest that the study sample can be applied to the target population.

In conclusion, the skewness and kurtosis values of the study data are all within the recommended range, with adequate values of both SD and SE, across all the tested constructs. Therefore, the data of this study is deemed to be normally distributed, which satisfies the normality conditions of analysis (Hair, 2009; Tabachnick and Fidell, 2007). Accordingly, the study sample and the findings that will be attained from this sample are dependable.

5.3.2 Assessment of Data Adequacy

In order to verify the adequacy of data set for analysis, we apply the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and the Bartlett's test of sphericity analysis. Briefly, Kaiser-Meyer-Olkin (KMO) tests the sample adequacy and the Bartlett's test of sphericity analysis checks the adequate relationships between the factors included in the analysis. According to Pallant (2013) and Tabachnick and Fidell (2007), the accepted standards value of KMO should be above 0.60 and Bartlett's test of sphericity is termed as highly significant at the 0.001 significance level ($p < 0.001$) (Tabachnick and Fidell, 2007) or at $p < 0.05$ (Pallant, 2013).

As Table 14 shows, the above two conditions have been well fulfilled in this study as KMO statistic for each construct ranged from 0.630 to 0.903 and Bartlett's Test of Sphericity for each construct is significant at $p < 0.000$. Those results show satisfactory relationships between the constructs included in the analysis. Therefore, it can be concluded that the data is appropriate for factor analysis.

Table 14. KMO and Bartlett's Test of Sphericity for the Study Constructs

CONSTRUCT	KMO MEASURE OF SAMPLING ADEQUACY	BARTLETT'S TEST OF SPHERICITY		
		Approx. Chi- Square	Df.	Sig
PEOU	0.630	300.524	3	0.000
PU and COMP	0.862	1338.795	15	0.000
CT_FB	0.780	884.062	6	0.000
CT_GOV	0.847	1429.752	6	0.000
PV	0.771	1850.427	21	0.000
SN	0.742	634.766	3	0.000
PE	0.751	509.228	6	0.000
FC	0.903	1367.900	21	0.000
PBC	0.733	523.432	3	0.000
ATT	0.762	.902.307	3	0.000
BI	0.729	679.547	3	0.000
All construct	0.912	15163.740	1225	0.000

5.4 Assessing Reliability and Validity

For the current study, the reliability and construct validity (include convergent, and discriminant validity) criteria were conducted as follow.

5.4.1 Assessing Reliability

Reliability measures the stability and consistency of a study instrument, which is usually measured by Cronbach's α . Cronbach's α values range between 0 and 1.0 and the closer Cronbach's α is to 1, the better is the measuring instrument reliability.

As shown in Table 15, the constructs included within the study instrument exhibit a high degree of reliability as Cronbach's α value for all constructs is 0.880. The table shows that seven constructs (7 of 11) achieve very good reliability, as Cronbach's α values are within 0.80 range. Two constructs achieved Cronbach's α value within 0.90 range (0.938 for CT_GOV and 0.923 for ATT) and others two constructs achieve Cronbach's α value within 0.70 range (0.768 for PE and 0.715 for PEOU).

Table 15. Cronbach's Alphas of the Measurement Scales

CONSTRUCT	NUMBER OF ITEMS	CRONBACH'S ALPHA	RESULTS
PEOU	3	0.715	Good Reliability
PU and COMP	6	0.877	Very Good Reliability
CT_FB	4	0.875	Very Good Reliability
CT_GOV	4	0.938	Excellent Reliability
PV	7	0.804	Very Good Reliability
SN	3	0.880	Vert Good Reliability
PE	4	0.768	Good Reliability
FC	7	0.885	Very Good Reliability
PBC	3	0.853	Very Good Reliability
ATT	3	0.923	Excellent Reliability
BI	3	0.884	Very Good Reliability
All Constructs	47	0.880	Very Good Reliability

Moreover, comparing Cronbach's α value for a given number of items (see Table 7, section 4.6.1) indicates that the study constructs achieved very good degree of reliability. Accordingly, the collected data and the findings that will be obtained from this instrument will be valid and reliable.

5.4.2 Assessing Construct Validity

Construct validity is used to measure items to reflect the theoretical latent construct. In next two sections, factor analysis is used to evaluate construct validity including measuring convergent and discriminant validity.

5.4.2.1 Convergent validity

Convergent validity verifies if the items correlates strongly with the construct that is intended to measure. Convergent validity could be asserted by three statistical tests: 1) Factor Loading for each item, which should exceed 0.50; 2) CR, which should be above 0.7 of every main construct; and 3) AVE of every main construct, which should exceed 0.50 (Hair, 2009).

As Table 16 shows, the factor loading indicators of every item included in the study constructs exceeded (0.50), ranged from (0.550) to (0.935). In fact, the factor loading values of most items are in the range of or greater than 0.80. The CR score of each construct exceeded (0.70), ranged from (0.832) to (0.960), exceeded recommended range. AVE score of each

construct exceeds (0.50), ranged from (0.6023) to (0.8668), exceeded recommended range. Accordingly, such findings meet all conditions for convergent validity.

Table 16. Results of Convergent Validity Tests

CONSTRUCT	ITEMS	FACTOR LOADINGS	CR	AVE
PEOU	PEOU1	0.864	0.832	0.6341
	PEOU2	0.820		
	PEOU3	0.705		
PU and COMP	PU1	0.742	0.901	0.6291
	PU2	0.751		
	PU3	0.835		
	COMP1	0.874		
	COMP2	0.761		
	COMP3	0.796		
CT_FB	CT_FB1	0.634	0.896	0.6875
	CT_FB2	0.879		
	CT_FB3	0.916		
	CT_FB4	0.858		
CT_GOV	CT_GOV1	0.880	0.948	0.8207
	CT_GOV2	0.924		
	CT_GOV3	0.902		
	CT_GOV4	0.917		
PV	PV1	0.931	0.960	0.7764
	PV2	0.937		
	PV3	0.931		
	PV4	0.759		
	PV5	0.849		
	PV6	0.867		
	PV7	0.880		
SN	SN1	0.887	0.925	0.8071
	SN2	0.902		
	SN3	0.906		
PE	PE1	0.803	0.879	0.6080
	PE2	0.867		
	PE3	0.856		
	PE4	0.550		
FC	FP1	0.735	0.913	0.6023
	FP2	0.845		
	FP3	0.810		
	GOV_COMT1	0.817		
	GOV_COMT2	0.807		
	GOV_COMT3	0.760		
	GOV_COMT4	0.640		
PBC	PBC1	0.872	0.911	0.7733
	PBC2	0.884		
	PBC3	0.882		
ATT	ATT1	0.923	0.951	0.8668
	ATT2	0.935		
	ATT3	0.935		
BI	BI1	0.906	0.929	0.8122
	BI2	0.924		
	BI3	0.873		

As can be seen from Table 16, all items loaded properly on their corresponding constructs except the items of PU and COMP constructs as they are loaded together. This means that a distinction between PU and COMP has not been recognized by the respondents. The cross-loading of PU and COMP means that both factors are being viewed identically by respondents (Moore and Benbasat, 1991).

Although the items for PU and COMP were identified separately by judges through content validity process as well as they are loaded separately in various literatures (Taylor and Todd, 1995; Venkatesh et al., 2003), nevertheless, PU and COMP are loaded together in this study similar to some previous studies, e.g., (Carter and Bélanger, 2005; Karahanna et al., 2006; Moore and Benbasat, 1991). The analysis of those studies shows that PU or/and relative advantage from one side and COMP from another side were loaded together.

In the literature, there are mixed procedures on whether to keep, combine or drop the factors that are loaded together. For example, some studies as (Alomari et al., 2012) drop both factors loaded together from any further analysis because they show weak loadings, others as (Carter and Belanger, 2004; Karahanna et al., 2006) drop one of those factors. However, others decided to combine the factors that loaded together into one construct because they were similar and could be treated together (Carter and Bélanger, 2005).

In this study, following the same argument presented by (Moore and Benbasat, 1991), which earlier used by (Carter and Bélanger, 2005), we decide to combine the items of PU and COMP as one construct since all items of both factors have good reliability, show strong loadings, and could be treated together. Moore and Benbasat argue “it is unlikely that respondents would perceive the various advantages of using [state e-Participation through Facebook], if its use were in fact not compatible with the respondents' experience or [life] style (Moore and Benbasat, 1991, p. 208).

5.4.2.2 Discriminant validity

While convergent validity asserts that measurement items correlate strongly with its assumed construct, discriminant validity ensures that such items correlate weakly with all other constructs (Sekaran and Bougie, 2010; Straub et al., 2004; Zikmund et al., 2013). Following previous scholars' suggestions, discriminant validity is shown when the square root of the AVE

from each construct is greater than its correlation coefficients with other constructs. Table 17 shows the matrix of correlation coefficients for all constructs in this research. Diagonal elements are the square roots of AVE for the constructs. As seen from Table 17, the square root of the AVE for each construct is greater than the correlation coefficients of all other constructs, providing indication of the discriminant validity of the scales, which is satisfied for every construct of the proposed research model of the current study.

Table 17. Results of Discriminant Validity

CONS.	PEOU	PU & COMP	CT_ FB	CT_ GOV	PV	SN	PE	FC	PBC	ATT	BI
PEOU	0.796										
PU & COMP	0.305	0.793									
CT_ FB	0.244	0.544	0.829								
CT_ GOV	0.006	0.217	0.320	0.905							
PV	0.219	0.181	0.217	0.357	0.881						
SN	0.220	0.368	0.308	0.195	0.482	0.898					
PE	0.285	0.326	0.239	0.105	0.395	0.610	0.779				
FC	0.179	0.376	0.279	0.209	0.412	0.620	0.635	0.776			
PBC	0.079	0.257	0.338	0.483	0.391	0.434	0.291	0.534	0.879		
ATT	0.192	0.400	0.315	0.185	0.371	0.637	0.560	0.730	0.477	0.931	
BI	0.192	.0410	0.303	0.181	0.370	0.587	0.539	0.661	0.459	0.790	0.901

Discriminant validity could be also assessed through comparison of the correlation coefficient between two constructs and the square root of the AVE of each construct. In this case, the AVE of each construct is greater than correlation coefficient between those constructs. For example, the square root of AVE of BI is 0.901 and the square root of AVE of ATT is 0.931, which is greater than correlation coefficient between BI and ATT (0.790). In similar way, each combination of any two construct was tested, and each pairing passed, providing indication of the discriminant validity of the scales.

5.4.2.3 Design validity

Design validity includes internal and external validity. Internal validity concerns with true cause-effect relationship between variables of a study. It could be essentially established by realizing significant regression model with considerable value of R-Square (R^2). External validity concerns with generalizing the results of the sample of the study to its population which it is taken from.

For the internal validity, the results presented in later Section 5.6 show that several regression analyses were emerged and considerably high R^2 values were produced (R^2 for BI = 0.649, R^2 for ATT = 0.394, R^2 for PV = 0.274, and R^2 for PBC= 0.285). Such high R^2 values (exceeds recommended value, $R^2= 0.25$) indicates that the included variables in the study model are significantly related (Gaur and Gaur, 2006). It also ensures that the most relevant factors related to the study phenomenon are being considered in the study.

As for external validity, as presented earlier in Section 5.2, a sufficient sample size was obtained (400 respondents). More importantly, the sample obtained is believed to truly represent the population in interest. The sample almost covers various segments of the target population in related to gender, age, job, education, place of living, and living region. Indeed, the study sample shows a satisfactory level of confidence that all segments of target population were adequately represented. Therefore, the study results are supposed to be generalized.

5.5 Descriptive Analysis

Descriptive analysis was conducted estimating the mean (M) and (SD) for the study constructs and used to determine the level of agreement among participants with constructs included in the study. To do that, participants' responses for each item comprise each construct were scored on a 5-point Likert Scale with 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Moderate Agree", 4 = "Agree", and 5 = "Strongly Agree". To determine the agreement level for each construct, participants' responses mean values were categorized as follow: a value of mean range from 1.00 to 2.33 is considered as "low agreement" among participants, a value of mean range from 2.34 to 3.66 is considered as "moderate agreement" among participants, and a value of mean range from 3.67 to 5.00 is considered as "high agreement" among participants. Table 18 presents the (M) and (SD) of the 11 main constructs included in the study. Based on above classification, the mean values of respondents' responses for the study construct ranged from "moderate agreement" (M=2.34) to "high" agreement (M=4.19). Table 18 declare that the lowest mean value was for CT_GOV construct (M=2.34), which represent a moderate level of agreement among participants toward such construct. Whereas, the highest mean value was for PEOU construct (M=4.19), which represent a high level of agreement among participants toward such construct.

Table 18. Descriptive Statistics of the Study Constructs

CONSTRUCT	MEAN	SD	SE	LEVEL of AGREEMENT
PEOU	4.19	0.04	0.80	High Agreement
PU and COMP	3.53	0.04	0.86	Moderate Agreement
CT_FB	2.97	0.98	0.05	Moderate Agreement
CT_GOV	2.34	1.02	0.05	Moderate Agreement
PV	3.47	0.75	0.04	Moderate Agreement
SN	3.54	0.86	0.04	Moderate Agreement
PE	3.90	0.80	0.04	High Agreement
FC	3.55	0.80	0.04	Moderate Agreement
PBC	2.81	1.05	0.04	Moderate Agreement
ATT	3.67	0.96	0.05	High Agreement
BI	3.57	0.96	0.05	Moderate Agreement

The descriptive statistics show that 3 constructs are perceived as highly agreement by participants; PEOU (M=4.19), PE (M=3.90), and ATT (M=3.67), followed by 8 constructs that are perceived as moderate agreement by participants; BI (M=3.57), FC (M=3.55), SN (M=3.54), PU and COMP (M=3.53), PV (M=3.47), PBC (M=2.81), CT_FB (M=2.97), and CT_GOV (M=2.65).

5.6 Regression Analysis and Hypotheses Testing

This section presents the results of testing research hypotheses related to the research model in Figure 5 presented in Chapter 4. Nineteen hypotheses were formulated for this research. Several multiple regression analyses were performed to test 18 hypotheses (H1 to H18). Multiple regression is selected as it multivariate statistical technique used to discover and measure if and how much the effect of several independent variables on a single dependent (Hair, 2009). Whereas, simple regression analysis was performed to test one hypothesis (H19) as it relates one dependent variable to one independent variable.

The following subsections present in details the results of regression analyses and related hypotheses. Additionally, it is essential to assess the fitness of regression analysis through several underlying assumptions for multiple regression. Usually, these assumptions are: 1) multicollinearity, 2) independence of residual, 3) linearity, 4) normality, and 5) outliers analysis assumptions. Each subsection also presents related results and discussions of those assumptions.

5.6.1 Determinants of intention to participate in government-led e-Participation initiatives through Facebook.

Five hypotheses (H1, H2, H3, H4, and H6) were formulated to test the impact of ATT, SN, PBC, PV, and PE on BI (intention to participate) as shown in Table 19. To test those hypotheses, multiple regression analysis, based on the “Enter” method, was performed between ATT, SN, PBC, PV, and PE as independent variables, and BI as the dependent variable. The “Enter” method regression indicates that all independent variables (which are predicted to impact the dependent variable) are entered in the regression model at the same time (in one step). The “Enter” method do not remove any independent variable regardless of whether it has (or not has) a significant effect on the dependent variable (see Table 20).

Table 19. Hypotheses Related to BI as Dependent Variable

PATH	HYPOTHESES
AT→BI	H1. <i>Attitude of citizens towards the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.</i>
SN→BI	H2. <i>Subjective norms of citizens in relation to the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.</i>
PBC→BI	H3. <i>Perceived behavior control of citizens in relation to participation engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook</i>
PV→BI	H4. <i>Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's intentions to participate in government- led e-Participation initiatives through Facebook.</i>
PE→BI	H6. <i>Higher level of citizens' participation efficacy positively affects their intentions to participate in government- led e-Participation initiatives through Facebook.</i>

Table 20. Enter Method Regression for BI as Dependent Variable

VARIABLES ENTERED/REMOVED (a)			
MODEL	VARIABLES ENTERED	VARIABLES REMOVED	METHOD
1	Participation Efficacy (PE), Perceived Behavior of Control (PBC), Perceived value (PV), Attitude (ATT), Subjective Norms (SN). (b)		Enter

a. Dependent Variable: Behavior Attention (BI)

b. All requested variables entered.

From the enter regression analysis, Table 21 shows that a significant model was emerged ($F(5,400) = 145.504$, $p < 0.000$). As shown in Table 22, the regression analysis demonstrates that 64.9% of the variance in BI is explained in the model ($R^2 = 0.649$).

Table 21. Regression Analysis Results for BI as Dependent Variable (1)

ANOVA (a)						
MODEL		SUM of SQUARES	DF	MEAN SQUARE	F	SIG.
1	Regression	237.536	5	47.507	145.504	.000(b)
	Residual	128.641	394	.327		
	Total	366.178	399			

a. Dependent Variable: BI

b. Predictors: (Constant), PE, PBC, PV, ATT, SN.

Table 22. Regression Analysis for BI as Dependent Variable (2)

MODEL SUMMARY					
MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR of the ESTIMATE	DURBIN-WATSON
1	.805 (a)	.649	.644	.57140	2.043

a. Predictors: (Constant), PE, PBC, PV, ATT, SN.

The significant variables are shown in Table 23 and include that ATT standardized coefficients beta (β)= 0.636, $p= 0.000$, PBC ($\beta=0.086$, $p=0.016$), and PE ($\beta=0.107$, $p=0.007$) have positively and significantly affected BI (as $p \leq 0.05$), providing support for the hypotheses H1, H3, and H6, respectively. Typically, the p-value should be significant at least at the 0.05 alpha protection level. Meanwhile, SN ($\beta= 0.067$, $p=0.132$) and PV ($\beta=0.026$, $p=0.459$) were positively but not significantly affected BI (as $p > 0.05$), providing no support for the hypotheses H2, and H4.

As shown in Table 23, the size (β), which indicates each independent variable's contribution to the predicted value, suggests that ATT has the largest impact in the explanation of variation of BI ($\beta= 0.636$). This is followed by the PE ($\beta=0.107$) and then PBC ($\beta=0.086$).

Table 23. Regression Analysis Results of BI as Dependent Variable (3)

COEFFICIENTS (a)							
MODEL	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS		SIG.	COLLINEARITY STATISTICS	
	B	STD. ERROR	BETA	T		TOLERANCE	VIF
(Constant)	.021	.168		.123	.001		
ATT	.667	.044	.636	15.095	.000	.502	1.994
SN	.074	.049	.067	1.509	.132	.455	2.200
PBC	.078	.033	.086	2.410	.016	.707	1.415
PV	.034	.045	.026	.741	.459	.713	1.403
PE	.128	.047	.107	2.707	.007	.567	1.764

a. Dependent Variable: BI

In regression analysis, it is important to assess whether the analysis met the underlying assumption of multiple regression. Usually, these assumptions are: multicollinearity, independence of residual, linearity, normality, and outliers analysis. In the following, each assumption is discussed.

- **Multicollinearity**

The multicollinearity occurs when independent variables included in a regression model are highly correlated with each other. Multicollinearity constitutes a very serious matter to estimate the real effect between the independent variables and dependent variables in the regression model, which ultimately threatens the predictive power of the regression model (Hair, 2009). Typically, two statistical test are suggested to check the multicollinearity: Variance Inflation Factor (VIF) and tolerance. In accordance with Hair (2009), the multicollinearity problem presents when the value of VIF is more than 10 and tolerance is less than 0.1. Nevertheless, even when VIF value falls below suggested thresholds (e.g., VIF values 3 to 5), it should be taken as an indication that multicollinearity may exist (Hair, 2009). For Field (2009), tolerance should be no less than 0.2 (Field, 2009). In this regression model as illustrated in Table 23, the multicollinearity is not challenged as VIF values are below 3 and tolerance values are above 0.20. Table 23 shows that the VIF for the model ranged between 1.403 for PV and 2.200 for SN which are below the recommended level. Also, Table 23 shows that the values of tolerance are varied between 0.455 for SN and 0.713 for PV which are above the recommended level; > 0.20 (Field, 2009; Hair, 2009). Thus, both the VIF and tolerance values suggest that the independent

variables (ATT, SN, PBC, PV, and PE) included in the study model do not suffer from the problem of multicollinearity.

- **Independence of residual**

In regression analysis, residual refers to the difference between the observed value of the dependent variable and the predicted value, so each observation has one residual. Independence of residuals concerns with autocorrelation or carryover from one observation of dependent variable to another (Hair, 2009). It is assumed that the residuals in the model are random. Specifying that the residuals are independent is another way of saying that the observations of the dependent variable are uncorrelated (Field, 2009). The Durbin-Watson Test values is suggested to measure of autocorrelation in residuals from regression analysis. The test statistic can vary between 0 and 4, with a value of 2 meaning that the residuals are uncorrelated (Field, 2009).

Table 22 shows that Durbin-Watson value is 2.043. Accordingly, there is no autocorrelation in the multiple linear regression data.

- **Linearity**

Linearity refers to whether a data pattern is linear (straight) or nonlinear (curved). Scatter Plot method was used to test the linearity assumption. A scatter plot graphs pairs of numerical data or variables to display the relationship between them. A scatterplot consists of: 1) two axes'; the horizontal axis represents independent variable and the vertical axis represents the residuals; 2) a series of dots represents one observation from a data set. The linearity relationship is confirmed when the dots are randomly placed in the scatter plot and **“No Pattern”** could be observed from the shape of the dots. From Figure 10, it can be concluded that there is no clear pattern between the residuals and the predicted values (values of dependent variable) as the dots do not follow a certain pattern which is consistent with the assumption of linearity.

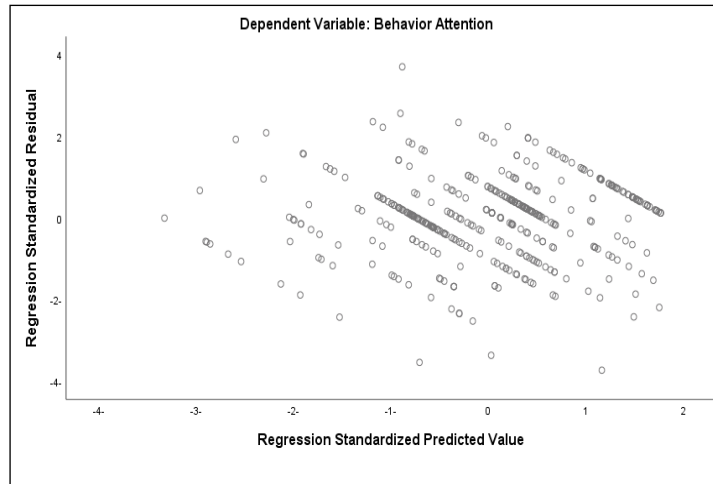


Figure 10. Scatter-Plot Linearity Test for BI as Dependent Variable

- **Normality**

Normality of residulas refers to the shape of residuals distribution, which can be examined by looking at the residuals histograms. Figure 11 illustrates an approximately normal distribution of residuals produced by the model, as majority of residuals values lay within normal probability diagram (the bell shape).

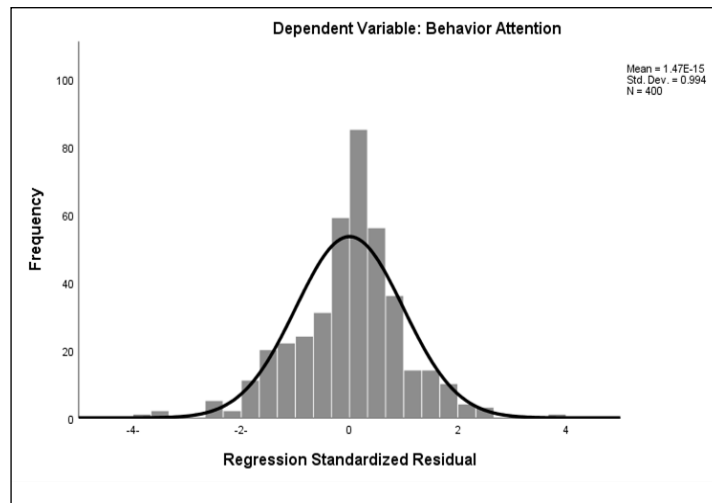


Figure 11. Residuals Histograms

Another useful plot to check residuals normality is the normal p-p plot. This plot compares the cumulative probabilities of the residuals to the expected frequencies. If the plotted points follow and are closed to a straight line (no significant departures from a straight line), then the residuals is close to normal. As Figure 12 shows, the plot shows that the points generally follow the normal

(diagonal) line with no strong deviations. This indicates that the residuals appear to be fairly normally distributed.

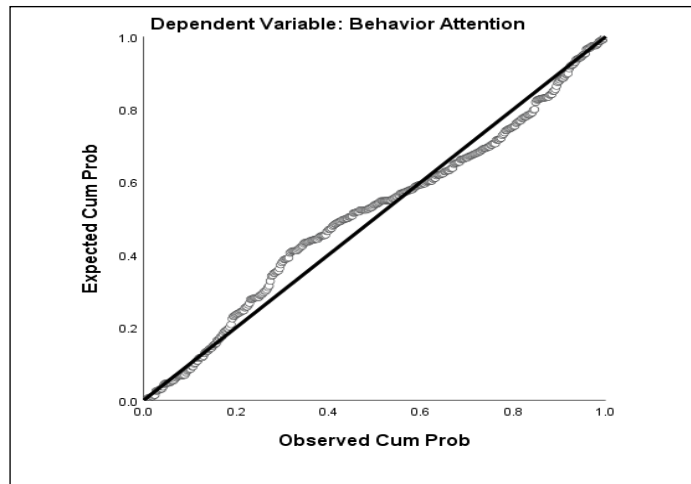


Figure 12. Normal P-P Plot of Regression Standardized Residual

- **Outliers analysis**

Regarding outliers, which refers to observations with unusual responses compared to the remaining observations (larger or smaller than average response). Outliers can be detected as those observations lying extremely far from most of other observations in a set of data. It is very important to identify outliers since it might negatively affect the validity and reliability of the data, providing potentially misleading or incorrect results. Cook's Distance and Centered Leverages values are two statistical tests used to detect and identify outliers in regression model. A general rule of thumb, an observation with Cook's Distance values less than 1 and Centered Leverages value is close to 0 has no influence on the regression model (Hair, 2009).

The Cook's Distance and Centered Leverages values presented in Appendix A and Appendix B are within acceptable range, which indicated that the outliers have no influence on the regression model.

5.6.2 Determinants of attitude towards government-led e-Participation initiatives through Facebook.

Six hypotheses (H5, H7, H9, H10+H11, H15, and H16) were formulated to test the impact of PV, PE, PEOU, PU and COMP, CT_FB and CT_GOV on ATT as shown in Table 24. To test

those hypotheses, multiple regression analysis was performed between PV, PE, PEOU, PU and COMP, CT_FB and CT_GOV as independent variables, and ATT as the dependent variable. The regression was performed by adopting the “Enter” regression method (see Table 25).

Table 24. Hypotheses Related ATT as Dependent Variable

PATH	HYPOTHESES
PV→ATT	H5. <i>Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's attitude to participate in government-led e-Participation initiatives through Facebook.</i>
PE→ATT	H7. <i>Higher level of citizens' participation efficacy will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.</i>
PEOU→ATT	H9. <i>Higher levels of perceived ease of use of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.</i>
PU and COMP→ATT	H10+H11. <i>Higher levels of perceived usefulness and compatibility of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.</i>
CT_FB→ATT	H15. <i>Higher levels of trust on Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.</i>
CT_GOV→ATT	H16. <i>Higher levels of citizens' trust in local government will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.</i>

From the multiple regression analysis, Table 26 shows that a significant model emerged ($F(6,400) = 42.637, p=0.000$). As shown in Table 27, the regression analysis shows that 39.4 % of the variance in ATT in the model ($R^2 = 0.394$).

Table 25. Enter Method Regression of ATT as Dependent Variable

VARIABLES ENTERED/REMOVED (a)			
MODEL	VARIABLES ENTERED	VARIABLES REMOVED	METHOD
1	Trust in Local Government (CT_GOV), Perceived Ease of Use (PEOU), Participation Efficacy (PE), Trust in Facebook (CT_FB), Perceived value (PV), Perceived Usefulness and Compatibility (PU and COMP). (b)		Enter

a. Dependent Variable: Attitude (ATT).

b. All requested variables entered.

Table 26. Regression Analysis Results of ATT as Dependent Variable (1)

ANOVA (b)						
MODEL		SUM of SQUARES	DF	MEAN SQUARE	F	SIG.
1	Regression	131.254	6	21.876	42.637	.000 (a)
	Residual	201.635	393	.513		
	Total	332.889	399			

a. Dependent Variable: ATT.

b. Predictors: (Constant), PV, PU and COMP, PEOU, CT_GOV, CT_FB.

Table 27. Regression Analysis Results of ATT as Dependent Variable (2)

MODEL SUMMARY (b)					
MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR of the ESTIMATE	DURBIN-WATSON
1	.628 (a)	.394	.385	.71629	1.948

a. Predictors: (Constant), (Constant), PV, PU and COMP, PEOU, CT_GOV, CT_FB.

b. Dependent Variable: ATT.

The significant variables are shown in Table 28 that include PV ($\beta = 0.154$, $p = 0.001$), PE ($\beta = 0.426$, $p = 0.000$), and PU and COMP ($\beta = 0.202$, $p = 0.000$) positively and significantly affected ATT (as $p \leq 0.05$), providing support for the hypotheses H5, H7, and H10+H11, respectively. Meanwhile, PEOU ($\beta = 0.043$, $p = 0.321 > 0.05$), CT_FB ($\beta = 0.075$, $p = 0.124 > 0.05$), and CT_GOV ($\beta = 0.382$, $p = 0.703 > 0.05$), has effect but not significant on ATT, providing no support for the hypothesis H9, H15, and H16.

Table 28. Regression Analysis Results of ATT as Dependent Variable (3)

COEFFICIENTS (a)							
MODEL	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS		COLLINEARITY STATISTICS		
	B	STD. ERROR	BETA	T	SIG.	TOLERANCE	VIF
(Constant)	.323	.254		1.270	.001		
PV	.187	.056	.154	3.334	.001	.726	1.377
PE	.486	.052	.426	9.413	.000	.753	1.327
PEOU	-.049	.049	-.043	-.994	.321	.833	1.200
PU and COMP	.215	.052	.202	4.111	.000	.641	1.559
CT_FB	.070	.046	.075	1.542	.124	.650	1.540
CT_GOV	.015	.040	.017	.382	.703	.782	1.278

a. Dependent Variable: ATT.

As demonstrated in Table 28, the size of (β) suggests that PE ($\beta= 0.426$) have the largest in the explanation of variation of ATT. This follow by PU and COMP (0.202), and PV ($\beta= 0.154$).

As for as multicollinearity, VIF values are below 10 and tolerance values are above 0.10 in regression model, as shown in Table 28. This conclude that the multicollinearity is not a concern in this model. Table 28 illustrates that the VIF for the model ranged between 1.200 for PEOU and 1.559 for PU and COMP which are below the recommended level (<10). Also, Table 28 shows that the values of tolerance are varied between 0.641 for PU and COMP and 0.833 for PEOU which are above the recommended level (> 0.20). Thus, both VIF and tolerance values suggest that the independent variables (PV, PE, PEOU, PU and COMP, CT_FB, and CT_GOV) included in the study model do not suffer from the problem of multicollinearity.

Concerning independence of residuals, Table 27 shows that Durbin-Watson value is 1.948, which is very close to 2 (value 2 meaning that the residuals are uncorrelated) as recommended by (Field, 2009). Thus, there is no reason to concern about the existence of correlation between the observations of the dependent variable.

As for linearity, Figure 13 shows the relationship between residuals and dependent variable values (ATT). Clearly, the dots approximately spread throughout the scatter plot and do not follow a certain pattern. Therefore, the linearity assumption has been met.

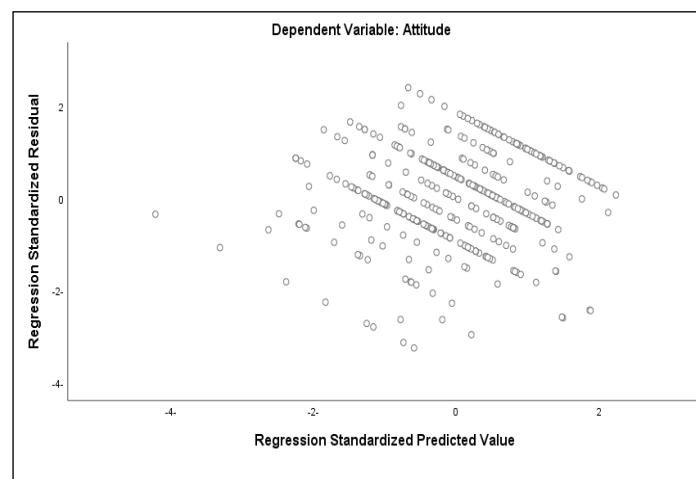


Figure 13. Scatter-Plot Linearity Test for ATT

For normality, Figure 14 illustrates an approximately normal distribution of residuals produced by the model as majority of residuals values lay within normal probability diagram (the bell shape). Figure 15 shows that the plotted points follows the normal (diagonal) line with no significant departures from the line. This indicates that the residuals appear to be fairly normally distributed.

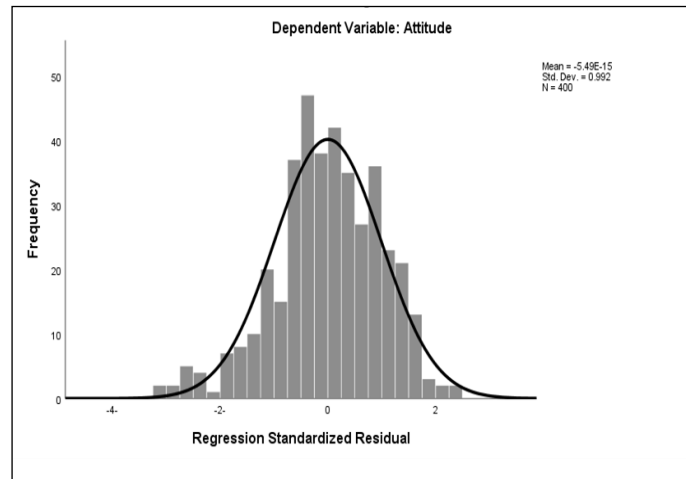


Figure 14. Residuals Histograms

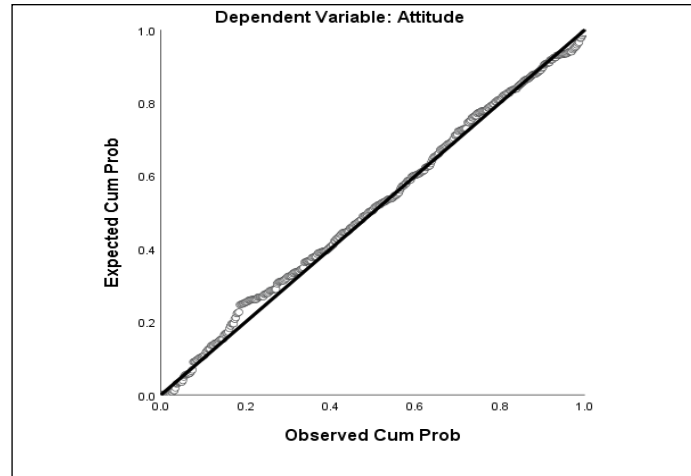


Figure 15. Normal P-P Plot of Regression Standardized Residual

As for the outliers detection, the Cook's Distance and Centered Leverages values presented in Appendix C and Appendix D are within acceptable range (Cook's Distance values less than 1 and Centered Leverages value is close to 0). Therefore, the outliers do not create problematic influence in the regression model.

5.6.3 Determinants of perceived value expected from government-led e-Participation through Facebook

Five hypotheses (H8, H12, H13+H14, H17, and H18) were formulated to test the impact of PE, PEOU, PU and COMP, CT_FB and CT_GOV on PV as shown in Table 29. To test these hypotheses, multiple regression analysis using “Enter” Method was performed between PE, PEOU, PU and COMP, CT_FB and CT_GOV as independent variables, and PV as the dependent variable (see Table 30).

Table 29. Hypotheses Related PV as Dependent Variable

PATH	HYPOTHESES
PE→PV	H8. <i>Higher level of citizens' participation efficacy will be positively related to higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook.</i>
PEOU→PV	H12. <i>Higher levels of perceived ease of use of Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.</i>
PU and COMP→PV	H13+H14. <i>Higher levels of perceived usefulness and compatibility of Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.</i>
CT_FB→PV	H17. <i>Higher levels of trust on Facebook will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.</i>
CT_GOV→PV	H18. <i>Higher levels of citizens' trust in local government will be positively related to higher level of perceived value from participation in government e-Participation initiatives through Facebook.</i>

Table 30. Enter Method Regression for PV as Dependent Variable

VARIABLES ENTERED/REMOVED (a)			
MODEL	VARIABLES ENTERED	VARIABLES REMOVED	METHOD
1	Trust in Local Government (CT_GOV), Perceived Ease of Use(PEOU), Participation Efficacy (PE), Trust in Facebook (CT_FB), Perceived Usefulness and Compatibility (PU and COMP). (b)		Enter

a. Dependent Variable: Perceived value (PV).

b. All requested variables entered.

From the regression analysis, Table 31 shows that a significant model was emerged ($F(5,400) = 29.727, p=0.000$). As shown in Table 32, the regression analysis shows that 27.4 % of the variance in PV is explained in the model ($R^2 = 0.274$).

Table 31. Regression Analysis Results of PV as Dependent Variable (1)

ANOVA(b)						
MODEL		SUM of SQUARES	DF	MEAN SQUARE	F	SIG.
1	Regression	61.230	5	12.246	29.727	.000 ^a
	Residual	162.312	394	.412		
	Total	223.542	399			

a. Dependent Variable: PV

b. Predictors: (Constant), PV, PU and COMP, PEOU, CT_GOV, PE, CT_FB.

Table 32. Regression Analysis Results of PV as Dependent Variable (2)

MODEL SUMMARY(b)					
MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR of the ESTIMATE	DURBIN-WATSON
1	.523 ^a	.274	.263	.64263	2.146

a. Predictors: (Constant), PV, PU and COMP, PEOU, CT_GOV, PE, CT_FB.

b. Dependent Variable: PV.

Table 33. Regression Analysis Results of PV as Dependent Variable (3)

COEFFICIENTS(a)							
MODEL	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS		SIG.	COLLINEARITY STATISTICS	
	B	STD. ERROR	BETA	T		TOLERANCE	VIF
(Constant)	1.269	.219		5.797	.000		
PE	.311	.044	.333	7.149	.000	.851	1.175
PEOU	.126	.043	.136	2.921	.004	.851	1.175
PU and COMP	-.049	.047	-.056	-1.053	.293	.643	1.555
CT_FB	.023	.041	.030	.567	.571	.650	1.538
CT_GOV	.240	.034	.326	7.136	.000	.883	1.132

a. Dependent Variable: PV.

The significant variables are shown in Table 33 that include PE ($\beta = 0.333$, $p = 0.000$), PEOU ($\beta = 0.136$, $p = 0.004$), and CT_GOV ($\beta = 0.326$, $p = 0.000$) have positively and significantly affected PV (as $p \leq 0.05$), providing support for the hypotheses H8, H12, and H18, respectively. Meanwhile, PU and COMP ($\beta = -0.056$, $p = 0.293 > 0.05$), and CT_FB ($\beta = 0.030$, $p = 0.571 > 0.05$) have an effect but not significantly affected PV, providing no support for the hypotheses H13+H14, and H17. As shown in Table 33, the size (β) suggests that PE ($\beta = 0.333$) and CT_GOV

($\beta = 0.326$.) have the largest impact in the explanation of variation of PV. This followed by PEOU ($\beta = 0.136$).

As for as multicollinearity, VIF values are below 10 and tolerance values are above 0.2 in regression model, as shown in Table 33. This conclude that the multicollinearity is not problematic to this model. Table 33 illustrates that VIF for the model ranged between 1.132 for CT_GOV and 1.555 for PU and COMP which are below the recommended level (< 10). Also, Table 33 shows that the values of tolerance are varied between 0.643 for PU and COMP and 0.883 for CT_GOV which are above the recommended level (> 0.20).

Concerning independence of residuals, Table 32 shows that Durbin-Watson value is 2.146, which is very close to 2 (value 2 meaning that the residuals are uncorrelated (Field, 2009)), this result indicates there is no correlation problem between the observations of the dependent variable.

As for linearity, Figure 16 shows the relationship between residuals and dependent variable values (PV). Clearly, the plotted dots approximately spread throughout the scatter plot and do not follow a certain pattern. Therefore, the linearity assumption has been met.

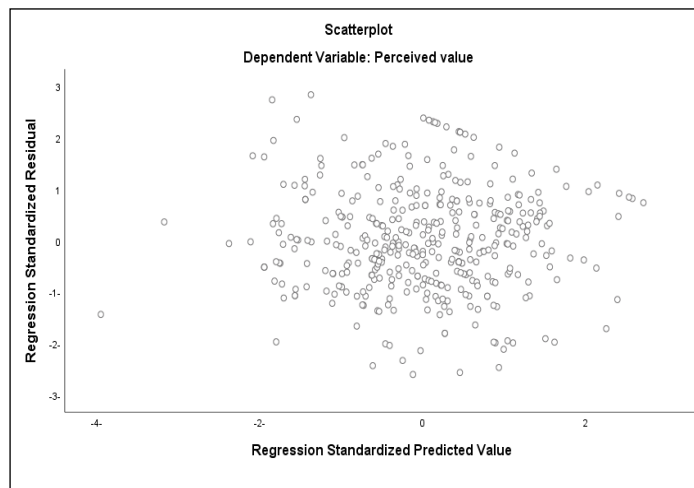


Figure 16. Scatter-Plot Linearity Test for PV

For normality, Figure 17 illustrates an approximately normal distribution of residuals produced by the model as majority of residuals values lay within normal probability diagram (the bell shape). Figure 18 shows that the plotted points follows the normal (diagonal) line with no

significant departures from the line. This indicates that the residuals appear to be normally distributed.

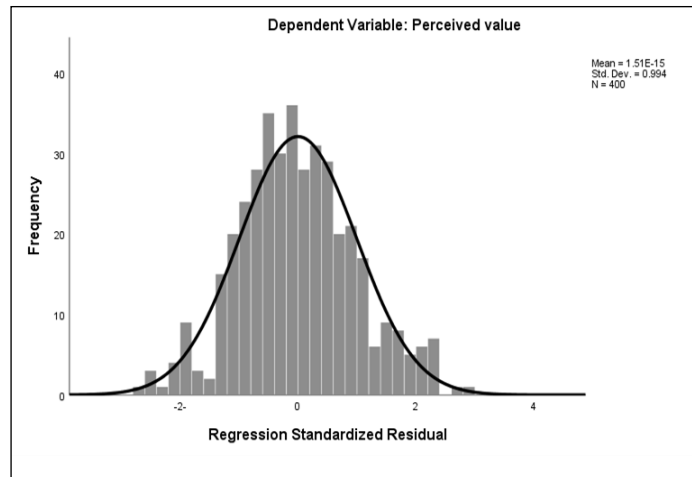


Figure 17. Residuals Histogram

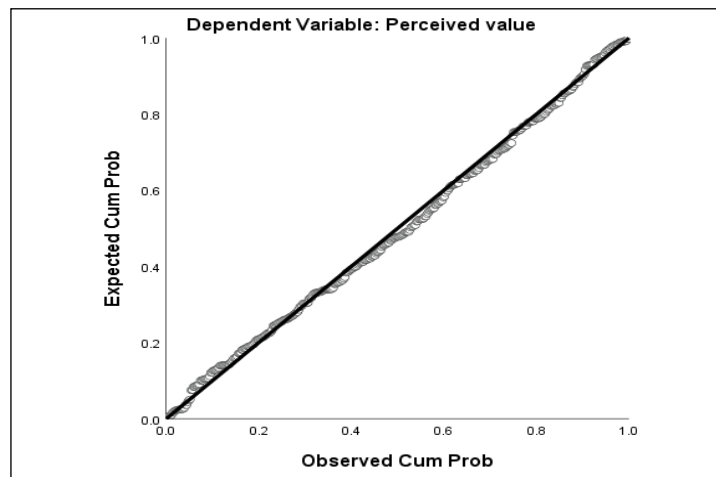


Figure 18. Normal P-P Plot of Regression Standardized Residual

As for the outliers detection, the Cook's Distance and Centered Leverages values presented in Appendix E and Appendix F are within acceptable range (Cook's Distance values less than 1 and Centered Leverages value is close to 0). Therefore, the outliers do not create problematic influence in the regression model.

5.6.4 Determinants of Perceived Behavior Control

One hypothesis (H19) was formulated to test the impact of FC on PBC. To test this hypothesis, which assumes that *facilitating conditions in relation to participation in government-led e-Participation initiatives through Facebook positively affects citizen Perceived behavior control*, a simple regression analysis was performed between FC as independent variables and PBC as the dependent variable. The purpose of simple regression is to relate one dependent variable to one independent variable.

Table 34. Simple Regression Analysis Results of PBC as Dependent Variable (1)

MODEL SUMMARY					
MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR OF THE ESTIMATE	DURBIN-WATSON
1	.534(a)	.285	.284	.88471	1.900

a. Predictors: (Constant), PBC

From the regression analysis, Table 34 shows that the effect of FC on PBC is significant ($\beta = 0.534$, $p = 0.000$), as $p \leq 0.05$, providing support for H19. The regression analysis in Table 35 shows that 28.5 % of the variance in PBC is explained by FC ($R^2 = 0.285$).

Table 35. Simple Regression Analysis Results of PBC as Dependent Variable

COEFFICIENTS (a)					
MODEL	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS		SIG.
	B	STD. ERROR	BETA	T	
(Constant)	.329	.201		1.631	.000
FC	.698	.055	.534	12.608	.000

a. Dependent Variable: Perceived Behavior of Control (PBC).

Concerning independence of residuals Table 34 shows that Durbin-Watson value is (1.900), which is very close to 2 (value 2 meaning that the residuals are uncorrelated as (Field, 2009)), this results indicates there is no correlation problem between the observations of the dependent variable.

As for linearity, Figure 19 shows the relationship between residuals and dependent variable values (PBC). Clearly, the plotted dots approximately spread throughout the scatter plot and do not follow a certain pattern. Therefore, the linearity assumption has been met.

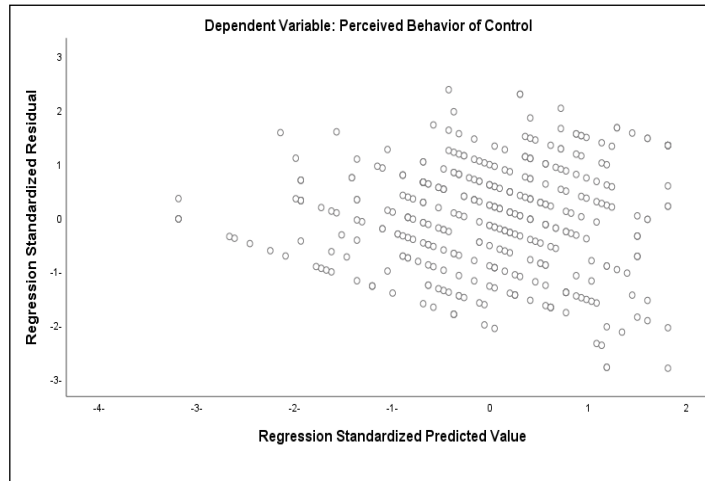


Figure 19. Scatter-Plot Linearity Test for PBC

For normality, Figure 20 illustrates an approximately normal distribution of residuals produced by the model as majority of residuals values lay within normal probability diagram (the bell shape). Figure 21 shows that the plotted points follows the normal (diagonal) line with no significant departures from the line. This indicates that the residuals appear to be normally distributed.

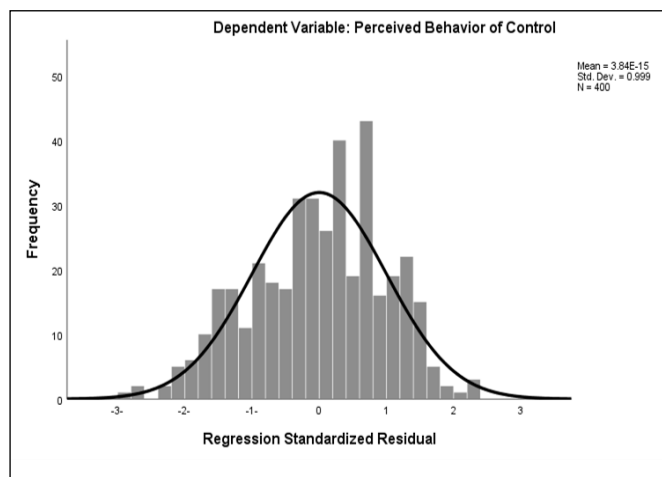


Figure 20. Residuals Histogram

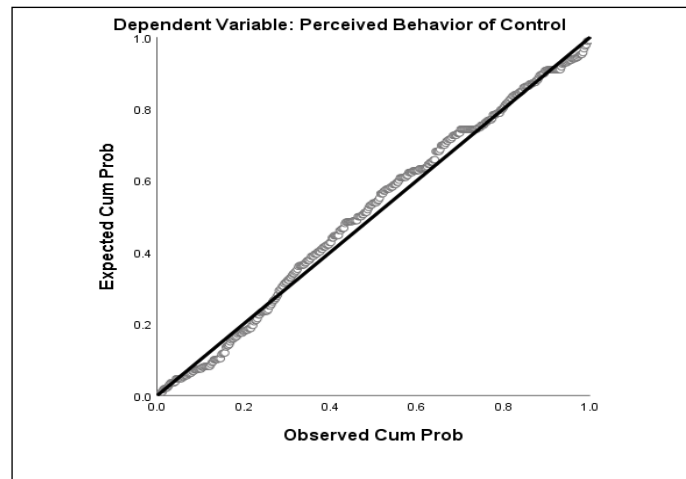


Figure 21. Normal P-P Plot of Regression Standardized Residual

5.7 Study Results Summary

This chapter presented the findings obtained from the data analysis of the survey that was conducted to examine Jordanians citizens' attitude and intention toward engaging in government-led e-Participation initiatives through Facebook.

First, the demographic characteristics of the study sample were introduced. The obtained sample indicates a satisfactory level of diversity as it contains participants from different ages, education backgrounds, occupations, and living region in Jordan. Then, the chapter reported descriptive analysis and several tests in relation to check the data of study sample normality and adequacy. The results show that the sample of study is believed to be normally distributed and suitable for conducting further analysis. Consequently, the chapter examined the reliability and validity of the study constructs. Reliability analysis showed that all constructs were higher than the acceptable level of Cronbach's α value (0,70) since it reaches 0.88 for all constructs. The convergent and discernment validity were established by three statistical standards: Factor Loading, CR, and AVE. The convergent validity was confirmed as all the study items loaded above 0.50 – CR scores above 0.70, and AVE score exceeded 0.50, which are all above the recommended range. Furthermore, all items are loaded properly with its corresponding constructs except the items of PU and COMP constructs as they loaded together. As a result of this cross-loading, following previous studies faced the same situation, the study combined the items of PU and COMP as one construct. The discriminant validity was also confirmed given that the

square root of the AVE from each construct is larger than all other cross-correlations with other constructs. For internal design validity, the high values of (R^2 for BI = 0.649, R^2 for ATT = 0.394, R^2 for PV = 0.274, and R^2 for PBC= 0.285) show the cause-effect relationship between variables of the study. As for external validity and generalizing of the study results, the study sample is decidedly to be considered representative of the total population. Therefore, the results observed in the study sample will also be seen in a predefined population.

Table 36. A Summary of the Study Hypotheses Tests Results

NO.	HYPOTHESIS PATH	BETA (β)	t-VALUE	PVALUE	RESULTS
H1	ATT→BI	0.636	15.095	0.000*	Supported
H2	SN→BI	0.067	1.509	0.132	Not supported
H3	PBC→BI	0.086	2.410	0.016***	Supported
H4	PV→BI	0.026	0.741	0.459	Not supported
H5	PV→ATT	0.154	3.334	0.001*	Supported
H6	PE→BI	0.107	2.707	0.007**	Supported
H7	PE→ATT	0.426	9.413	0.000*	Supported
H8	PE→PV	0.333	7.149	0.000*	Supported
H9	PEOU→ATT	-0.043	-0.994	0.321	Not supported
H10+H11	PU and COMP →ATT	0.202	4.111	0.000*	Supported
H12	PEOU→PV	0.136	2.921	0.004**	Supported
H13+14	PU and COMP →PV	-0.056	-1.053	0.293	Not supported
H15	CT_FB→ATT	0.075	1.542	0.124	Not supported
H16	CT_GOV→ATT	0.017	0.382	0.703	Not supported
H17	CT_FB→PV	0.030	0.567	0.571	Not supported
H18	CT_GOV→PV	0.326	7.136	0.000*	Supported
H19	FC→PBC	0.534	12.608	0.000*	Supported

*p ≤ 0.001

**p ≤ 0.01

***p ≤ 0.05

Note: Because PU and COMP loaded together, we combined items from each construct and tested it as one construct (H10+H11 and H13+H14).

To test the study hypotheses, several multiple and simple linear regressions were conducted. In addition, the underlying assumptions of regression analysis assumptions (such as multicollinearity, independence of residual, linearity, normality, and outliers analysis) were tested and met with recommended standards. The findings were shown in several sections. As summarized in Table 36, 10 hypotheses have been supported from empirical test (H1, H3, H5, H6, H7, H8, H10+H11, H12, H18, and H19); whereas, seven hypotheses have been not (H2, H4, H9, H13+H14, H15, H16, H17). As shown in Table 36, the multiple regression analyses provided evidences that:

- ATT, PE, and PBC significantly influence BI (intention to participate) of Jordanians citizens to engage in government-led e-Participation initiatives through Facebook. Whilst, SN and PV were not significant to influence their intention to participate. The significant factors; ATT, PE, and PBC explain 64.9% of the changes in the BI.
- PV, PE, and PU and COMP significantly influence Jordanians citizens attitude toward government-led e-Participation initiatives through Facebook. In contrast, PEOU, CT_FB, and CT_GOV were not significant to have an impact on their attitude. The significant factors; PV, PE, and PU and COMP explain 39.4% of the change in the ATT.
- PE, PEOU, and CT_GOV significantly influence PV to be attained from engaging in government-led e-Participation initiatives through Facebook. Whilst, PU and COMP and CT_FB were not significant predictors in this model. The significant factors - PE, PEOU, and CT_GOV; explain 27.4% of the change in the PV.
- Finally, the simple regression analysis provided evidence that FC significantly influence Jordanians citizens PBC of government-led e-Participation initiatives through Facebook. In this test, FC explains 28.5% of the change in PBC.

Next chapter discusses those results corresponding with the study questions that have been stated in Chapter 1. Additionally, it also compares the results with related previous studies.

6 . CHAPTER SIX: STUDY DISCUSSION

6.1 Introduction

Based on the results obtained from Chapter 5, this chapter comprehensively discusses the study results. The characteristics of the study sample are discussed first in Section 6.2, as a topic that has been rarely given a considerable attention. Then, a comprehensive discussion of the results is organized with the list of the research questions and their associated hypotheses in Sections 6.3 and 6.4. While Section 6.3 discusses the findings related to Jordanian citizens' intention to participate in government-led e-Participation initiatives through Facebook, Section 6.4 discusses the findings related Jordanian citizens' attitude toward government-led e-Participation initiatives through Facebook. This is followed by the identification of the key implications for theory and practice in Section 6.5. Finally, the summary of discussion is represented in Section 6.6.

6.2 Sample Characteristics Discussion

This section sheds more lights on the sample characteristics of the study sample. As previously declared in Chapter 4, conducting meaningful and defensible quantitative research results requires a sufficient sample size with good representative of the population of interest (Hair, 2009; Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013). So, forming adequate sample is very important to ensure the accuracy and trustworthiness of the results, Moreover, it is worthwhile to further compared the study sample characteristics with those reported in e-Participation/e-Government research surveys in Jordan.

More specifically, this section discusses the study sample characteristic obtained (i.e., number of participants, current job, level of education, gender, age, and participant's place of living in Jordan respectively) along with providing related comparisons with 12 recent and the most cited e-Participation/e-Government research conducted in Jordan, those studies are: (Abu-Shanab, 2014; Abu-Shanab and Al-Dalou, 2016; Abu-Shanab and Baker, 2011; Al Hujran et al., 2013; Al-Hujran et al., 2014, 2015, Alomari, 2014, 2016; Alomari et al., 2012; Alryalat et al., 2013b; Bataineh and Abu-Shanab, 2016; Khasawneh and Abu-Shanab, 2013). The discussion and comparisons follow.

Number of Participants, Current Jobs, and Education Level – The current study sample consists of 400 respondents, a sample size that is large enough and indicates a sufficient requirement to conduct statistical tests (Saunders et al., 2011; Sekaran and Bougie, 2010; Zikmund et al., 2013).

Figure 22 shows that samples size of the selected 12 e-Participation/e-Government research surveys in Jordan. Clearly, most of those studies samples were within the range of 200 – 300 respondents, with only 3 studies collected or exceeded 400 respondents. Based on that, the study sample size is estimated in an excellent range in Jordan e-Participation/e-Government research context.

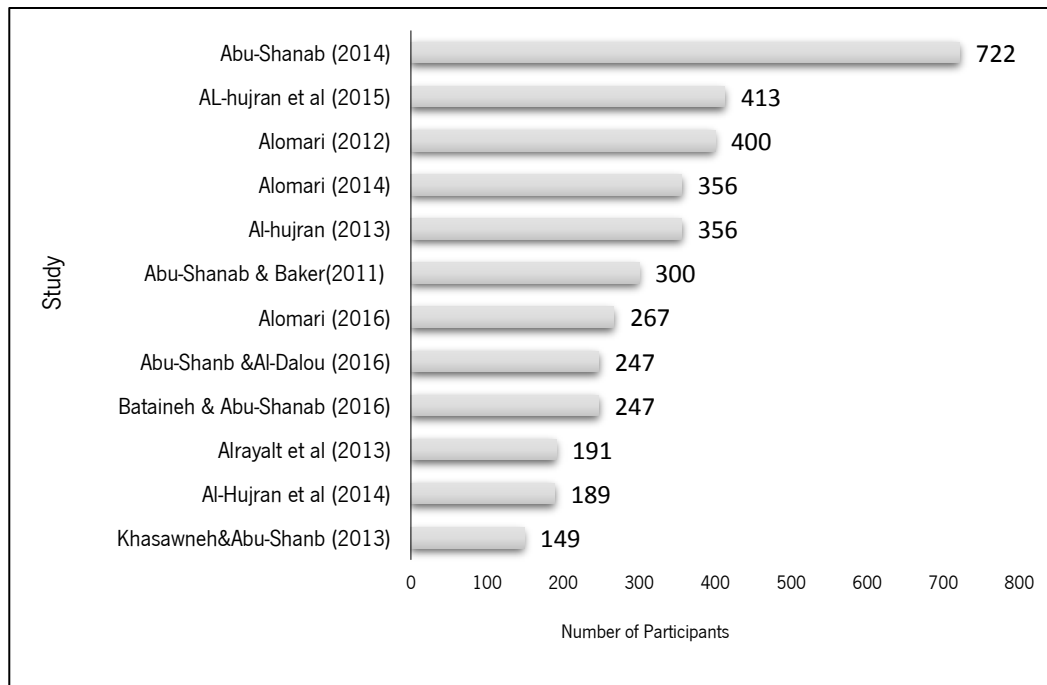


Figure 22. Number of Participants over 12 Selected E-Participation/E-Government Research Surveys in Jordan

While Abu-Shanab (2014) study is one of large scale study, the majority of participants were students (Abu-Shanab, 2014). Noting that, the most of those studies basically confined their sampling frame based on under and graduate students, with very scarce exceptions that targeted citizens who are actually using the e-Participation/e-Government services such as (Alomari, 2014) study. This troublingly using of students may have possibly skewed the results and then it is a major barrier and limitation towards the generalizability of those studies results

into Jordanian context (Abu-Shanab and Al-Dalou, 2016; Abu-Shanab and Baker, 2011; Bataineh and Abu-Shanab, 2016).

Generalizing the results of a survey to the population of interest is mainly based on meeting two essential conditions: the sample is large enough and exactly or relatively represents the population from which it is taken. In fact, many studies often use students as research participants', who not always fit to all research cases since they may not truly represent a study population. Hence, the researchers may cannot accurately address the research problem and questions of interest (Sekaran and Bougie, 2010; Zikmund et al., 2013). Moreover, Peterson (2001) debates extending any relationship found by using college student subjects to population of a study (Peterson, 2001). Concerning e-Government research, using students as the subjects of e-Government studies remains a major barrier towards the generalization of studies results to the target population. Recently, Hofmann (2012) highlighted the importance of taking a sample that relatively represents target population (for example, people who using the e-Government service) instead of falling back on students (Hofmann et al., 2012).

The use of a student sample is generally inadvisable (Hofmann et al., 2012; Peterson, 2001; Zikmund et al., 2013) unless it is match with the setting of the study (see Ozkan and Kanat (2011) study that focus on student loans provided by the government in Turkey). Since previous e-Participation/e-Government research in Jordan suffered from using student who were probably not aware and fully understand e-Participation/e-Government services very clearly, or never used it (Khasawneh and Tarawneh, 2016). Hence, the respondents in the current study were generally workers (61.7%) with only 20.5% were students (see Table 12). This rationally assumes that the respondents would have higher experiences and more mature perception towards the research topic. Additionally, the participants' different jobs indicate a good diversity in the study sample.

The study sample shows another diversity aspect related to the participants' different education level. As discussed by Lyu (2008), citizen's level of education plays significant role in shaping their motivation and capability toward using e-Participation as well as e-Government activities (Lyu, 2008). Further, citizen's level of education proved to influence perceived political efficacy, which in turn effect intention and actual political participation (Caprara et al., 2009).

Considering that and looking into the study participant's education level, the study sample contains diverse citizens who holds (or they are currently studying) various education degrees.

Gender of Participants – In term of gender of participants, the gender breakdown of the study sample shows that 64% were males and 36% were females. Knowing this, it might appear a gender imbalance in the sample. In fact, the study sample has relatively good gender balance if it is compared with the gender distribution of Jordanian Facebook users as shown in Figure 23. The figure, which is based on recent Arab social media report 2017, shows that 59% of Jordanian Facebook users are males and 41% are females (Arab Social Media Report, 2017). Further, the proportion of female to male using Facebook in Jordan is estimated by (Abu-Taieh, 2014) as (7:10). Relatively, the gender breakdown of the study sample consists with this proportion.

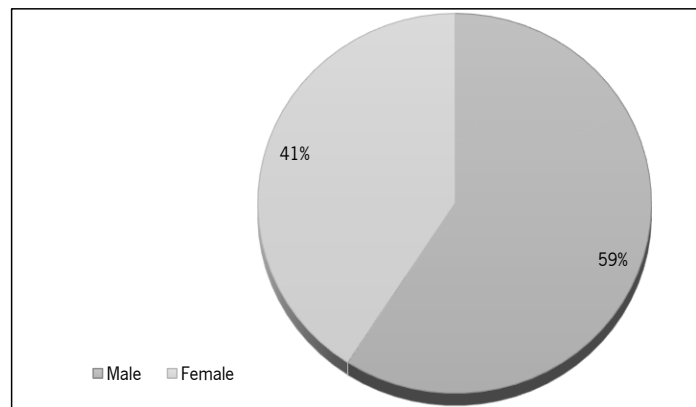


Figure 23. Gender Breakdown of Facebook Users in Jordan
(Arab Social Media Report, 2017)

Another broader possible explanation relating to the participants gender distribution lays in the fact that males reported higher levels of political activity than females (Caprara et al., 2009). For instance, the findings from several e-Participation cases from Europe and south Korea show that males were often interested in engaging in e-Participation/political and public debates rather than females (Åström and Karlsson, 2016; Ertio et al., 2016; Kim and Lee, 2011; Schoettle, 2016). Jordan is not an exception in this regard, where political career and participation in political life have been traditionally dominated by males (Dababneh, 2012). Consequently, this might negatively affect Jordanian women willingness to answer the survey.

There is lack of explanations found in the 12 selected e-Participation/e-Government research surveys in Jordan regarding gender distribution.

Overall, the gender distribution of the study sample could be considered relatively close representative of the whole gender distribution of Jordanian Facebook users.

Age of Participants – Regarding the age of participants of the study, almost all participants were in twenties or thirties. The largest two age groups in the sample are those between (18 to 24) and (25 to 34) years old, those groups represented about 25.8% and 36.6% of the study sample respectively; these findings are similar to those presented by Arab social media report in which the similar age groups were reported as the largest two age groups currently using Facebook in Jordan (Arab Social Media Report, 2017). Most participant's age in the selected e-Participation/e-Government research surveys in Jordan were in twenties. This seems reasonable since most of participants were students.

Participant's Place of Living in Jordan – Finally, relating to participant's place of living, the current study obtained respondents from various regions in the country; 16% were from northern region, 64.8% were from central region, and 10.8% were from southern region. Those respondents' percentages are fairly representing Facebook users from different regions in the country when it is compared with the real distribution of Jordanian Facebook users according to the place of living as shown in Table 37.

Comparing with available data form the 12 e-Participation/e-Government research surveys in Jordan, the current study is the only study, as far as we know, that succeeded to collect respondents from various regions in the country.

Table 37. Facebook Users According to Jordan Regions*

JORDAN REGION	FACEBOOK USERS (ESTIMATED)	PERCENTAGE
Northern Region	760,000	17.3%
Central Region	3,440,000	78.2%
Southern Region	200,000	4.5%
Total	4,400,000	100%

* The table based on primary statistics provided by Facebook advertising services.

6.3 Citizens' Intentions to Participate in Government-led e-Participation Initiatives through Facebook

This section answers the following research questions and discusses the findings of related hypotheses:

Question 1: What is citizens' intention to engage in government-led e-Participation initiatives through Facebook?

Question 2: What are the factors considered relevant to influence citizens' intentions to engage in government-led e-Participation initiatives through Facebook?

H1. *Attitude of citizens towards the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.*

H2. *Subjective norms of citizens in relation to the engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.*

H3. *Perceived behavior control of citizens in relation to participation engagement in government-led e-Participation initiatives through Facebook positively affects citizen participation intentions to engage in government-led e-Participation initiatives through Facebook.*

H4. *Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's intentions to participate in government- led e-Participation initiatives through Facebook.*

H6. *Higher level of citizens' participation efficacy positively affects their intentions to participate in government- led e-Participation initiatives through Facebook.*

Question 1 was designed to measure the Jordanian citizens' intentions to participate in government-led e-Participation initiatives through Facebook. Based on the survey items in which

6.3 Citizens' Intentions to Participate in Government-led E-Participation Initiatives Through Facebook

Jordanians citizens were asked about their intentions to participate, it concludes – as shown in Table 38 – that Jordanians citizens show a moderate intention to participate in government-led e-Participation initiatives through Facebook. Table 38 shows the results of the M and SD of the three items related to Jordanians citizens' intention to engage in government-led e-Participation initiatives through Facebook which were measured on 5-point Likert scale. As a mean score for all items is (M=3.57), it reflects a moderate intention to participate. Additionally, Table 39 presents the averages of responds in percentage for each degree of preference (i.e. strongly agree, agree, moderate agree, disagree, and strongly disagree) of the intention to participate items.

Table 38. Mean and Standard Deviation for the Internal Items of Intention to Participate

CONSTRUCT	ITEMS	MEAN	SD
Intention to participate (Behavior Intention)	BI1. I expect that I would engage in government-led e-Participation initiatives through Facebook.	3.62	1.04
	BI 2. I intend to engage in government-led e-Participation initiatives through Facebook.	3.52	1.09
	BI3. It would be very likely that I will engage in government-led e-Participation initiatives through Facebook in the near future.	3.56	1.06
	All items	3.57	0.96

The percentage findings indicate that around half of Jordanian citizens expressed great intention to engage in government-led e-Participation initiatives through Facebook (strongly agree and agree percentages) and around one-third of them showed average intention (moderate agree percentages). However, not small portion declared that they will not engage (strongly disagree and disagree percentages). Such finding suggests that majority of Jordanians citizens were relatively intended to participate in such initiatives.

Table 39. Percentage for Each Degree of Preference of the Intention to Participate Items

ITEMS	STRONGLY AGREE	AGREE	MODERATE AGREE	DISAGREE	STRONGLY DISAGREE
BI1. I expect that I would engage in government-led e-Participation initiatives through Facebook.	21%	35.6%	30.7%	7.7%	5%
BI 2. I intend to engage in government-led e-Participation initiatives through Facebook.	21.2%	30.6%	32.2%	10.9%	5.1%

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B13. It would be very likely that I will engage in government-led e-Participation initiatives through Facebook in the near future.	22.2%	29.3%	35.2%	9.6%	3.7%
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To answer question 2, five factors – ATT, SN, PBC, PV, and PE – were expected to affect citizens' intention to engage in government-led e-Participation initiatives through Facebook. In thus, five hypotheses shown above (H1, H2, H3, H4, and H6) were tested. Based on examining the path analysis results, the study provides evidences that Jordanian citizens' ATT, PE, and PBC have positive influences on their intention to engage in government-led e-Participation initiatives through Facebook, while SN and PV did not influence their intention. Furthermore, those three antecedents (ATT, PE, and PBC) explain 64.9% of the variation of citizens' intention to engage in government-led e-Participation initiatives through Facebook in the proposed model. These findings are discussed below.

- **Significant role of attitude on citizens' intention to participate**

The study results show that ATT has a significant positive influence on Jordanian citizens' intention to engage in government-led e-Participation initiatives through Facebook, a result that supported hypothesis H1. The study also reveals that ATT have the strongest relationship with intention to engage ($\beta = 0.636$), this follow by PE ($\beta = 0.107$), and PBC ($\beta = 0.016$). The greatest significant impact of ATT is indeed in-line with the expectations of TPB, and with related technology acceptance models and theories; TAM (Davis, 1989) and UTUAT (Venkatesh et al., 2003). Moreover, such direct and strong determinant of ATT is consistent with prior research findings on citizens acceptance of e-Participation/e-Democracy activities (Alharbi et al., 2016; Al-Hujran et al., 2014; Alomari, 2016, 2016; Nchise, 2012; Powell et al., 2012), citizens intention to use e-Government services (Al-Hujran et al., 2015; Alomari et al., 2012; Ozkan and Kanat, 2011; Rana et al., 2013), and citizens intention to use mobile government services (Hung et al., 2013; Susanto and Goodwin, 2013; Wang, 2014).

The finding of the current study reflects the powerful impact of Jordanians citizens' attitude on their intention in whether to engage (or not engage) in government-led e-Participation initiatives through Facebook. Given this, it becomes important to understand what forms citizens' attitude towards engaging in government-led e-Participation initiatives through Facebook. This

topic will be further discussed in next Section 6.4. Briefly, the study finds that PE, PV, and PU and COMP of Facebook are key determinants of citizens' attitude toward engaging in government-led e-Participation initiatives through Facebook.

- **Significant role of participation efficacy on citizens' intention to participate**

The study finds that PE is significantly and positively impacts Jordanians citizens' intentions to engage in government-led e-Participation initiatives through Facebook ($\beta = 0.107$), a result that supported hypothesis H6. Referring to prior study in India, PE has strong influence on citizens' intentions to use government initiated e-Participation initiatives (Alathur et al., 2016). Generally, there are scarce empirical researches in e-Participation context focus on the role of PE as a predictor of e-Participation use. However, consistent with this work but from political participation context, citizens with higher perceived political efficacy are more inclined toward online political engagement. Political efficacy has been found to influence citizens expressive political participation online, specifically through social media sphere (Gil de Zúñiga et al., 2014; Park, 2015; Yang and DeHart, 2016). Indeed, recent studies showed that political efficacy positively predicted online political participation (Caprara et al., 2009; Gastil and Xenos, 2010; Sohl and Özdemir, 2014).

The significant effect of PE found in the current study is reasonable; citizens who feel to own sufficient and great PE would demonstrate more self-confidence to participate and then they are more likely to engage in e-Participation initiatives. Furthermore, the significant effect of PE emphasized Jordanian citizens' awareness and interest toward problems and issues facing Jordan community, which could be also inferring to high sense of civic responsibility Jordanian citizens feel to uphold their obligations and responsibilities as citizens (Putnam, 2001), and to perform their civic duties (Campbell et al., 1954) as part of their community.

Based on above discussions, this study tends to validate the importance of PE in understanding Jordanian citizens' intention to engage in government-led e-Participation initiatives through Facebook.

- **Significant role of perceived behavioral control on citizens' intention to participate**

6.3 Citizens' Intentions to Participate in Government-led E-Participation Initiatives Through Facebook

PBC is the third factor and was found to have positive influence on Jordanian citizens' intention to engage in government-led e-Participation initiatives through Facebook ($\beta = 0.016$), which supported hypothesis H3. This finding is consistent with the underlying assumption of TPB (Ajzen, 1991; Armitage and Conner, 2001; Taylor and Todd, 1995). Additionally, several findings from prior studies, particularly in e-Democracy (Al-Hujran et al., 2014; Nchise, 2012) and e-Government contexts (Hung et al., 2013; Ozkan and Kanat, 2011; Rana et al., 2012) confirmed the role of PBC in shaping citizens' intention to engage in e-Democracy/e-Government activities.

However, PBC is not always associated to have influence on user intention. Referring to a study focused on mobile government, PBC has no longer forming user decision to use or not to use government short message service (Susanto and Goodwin, 2013). Perhaps, this might help explaining the slight effect of PBC ($\beta = 0.016$) as it has the lowest effect on citizens' intentions in the current study comparing with ATT and PE. Finally, the study finds that the PBC is influenced by facilitating conditions ($\beta = 0.534$), a result that supported hypothesis H19. The facilitating conditions is composed by two beliefs: namely government's ability to manage e-Participation initiatives, and freedom to participate. Indeed, such significant role of facilitating condition on PBC is evident in the literature (Susanto and Goodwin, 2013; Taylor and Todd, 1995).

- **Insignificant role of subjective norms on citizens' intention to participate**

Contrary to the assertion of TPB, SN were not found to have significant effects on Jordanian citizens' intention to engage in government-led e-Participation initiatives through Facebook, a result that not supported hypothesis H2. This finding is interesting and worth noting since numerous previous studies conducted in Arabic countries (i.e., Jordan and Saudi Arabia) were confirmed the strongest effect of SN on citizens' intention to engage in e-Participation activities and to use e-Democracy tools (Alharbi et al., 2016; Al-Hujran et al., 2014). As Al-Hujran et al. (2014) found that SN have a positive influence on citizens' usage of e-Democracy tools in Jordan. SN was also found to be the most important predictor of Saudi citizens' intention to engage in e-Participation activities (Alharbi et al., 2016). Further, the insignificance of SN in the current study is inconsistent with the findings reported by other related e-Government studies (Hung et al., 2013), which demonstrate the role of SN in shaping citizens acceptance and adoption of e-Government services.

6.3 Citizens' Intentions to Participate in Government-led E-Participation Initiatives Through Facebook

The insignificance of SN could be explained as follow. **First**, the role of SN has been controversial in technology acceptance models; DTPB and TAM. While Taylor and Todd (1995) demonstrated the role of SN in DTPB (Taylor and Todd, 1995), Davis (1989) argued that SN has not enough relevance to be considered and included in TAM (Davis, 1989).

Second, SN has been known to have weaker effects on BI comparing with the effect of ATT and PBC, especially when the targeted behavior occurred in voluntary environment (Ajzen, 1991; Armitage and Conner, 2001). Consistently with such argument and given that behaviors differ with respect to voluntary versus mandatory environment, Venkatesh et al. (2003) confirmed that SN has not hold significant effects on BI in voluntary implementations (Venkatesh et al., 2003). Furthermore, SN has not significant role in online interactions (Davis, 1989; Venkatesh et al., 2003). This argument is in line with recently findings that SN has no significant effect towards citizens' acceptance and use of government short message services (Susanto and Goodwin, 2013), and SN has no significant effect related with political participation through Twitter (Varnali and Gorgulu, 2015). More closely related to the concerns of the present study – government-led e-Participation initiatives through Facebook – which is still fully voluntary (in the sense that citizens can freely decide to participate or not) and such initiatives assumed to be carried out through online sphere (Facebook), citizens' intention to engage in such initiatives will be probably formed based on other determining factor (e.g., ATT, PE, and PBC) rather than due to social pressure.

Third, the insignificant effect of SN on BI might be partially due to the demographic characteristics of the current study participants. As has been explained by Taylor and Todd (1995), the discrepancy results concerning SN effect resulted , in part, from the use of student subjects, whose intention toward targeted behavior can be excessively influenced by others' opinions (Taylor and Todd, 1995). Considering this explanation, when we look at the study sample, only 20% of participants are students and majority of participants are workers (61.7%), which emphasizes that in the study most participants are more able to develop independent thinking and a probable tendency of placing relatively less weight on relevant others' opinions, as compared with their student subject counterparts.

In this connection and as a fourth possible explanation, the non-significant effects of SN found in the study may be eclipsed by citizen PE. As previously indicated, PE is highly perceived

by Jordanians citizens (M=3.90 as shown in Table 18) since they decidedly believe in their adequate knowledge, ability, and capability to participate in government-led e-Participation initiatives through Facebook. They also highly considered their obligations toward their community. Accordingly, it is rational to assume that even they respect relevant others' opinions about engaging in government-led e-Participation initiatives through Facebook, but they are placing low consideration for these opinions when evaluating or making participation intention decisions.

- **Insignificant role of perceived value on citizens' intention to participate**

Contrary to our expectation, the study found no direct significant effect of PV on Jordanian citizens' intention to engage in government-led e-Participation initiatives through Facebook, a result that not supported hypothesis H4. This finding is contrasting with TPB assumption that a person is more likely to perform a behavior when that behavior is expected to produce a desirable outcome (Ajzen, 2006). The lack of statistical significant of PV in the current study finding is also contrasting with UTAUT model (Venkatesh et al., 2003), which suggest that outcome expectations directly influence usage behavior.

Nevertheless, there are several ways to interpret this finding. **First**, the ATT might have mediated the relationship between PV and intention to participate. As we will further discuss in Section 6.4, PV is found to influence Jordanian citizens attitude toward engaging in government-led e-Participation initiatives through Facebook. Since the ATT directly and positively influences intentions to participate, this indicates that the role of PV might be partially mediated over ATT. This finding consists with (Al-Hujran et al., 2015), who demonstrated that ATT fully mediates the relationship between perceived public value and behavioral intention to use e-Government services.

Second, e-Participation initiatives through Facebook are still an emerging phenomenon and they are only in an infancy stage in many countries, particularly in Jordan (Abu-Shanab and Al-Dalou, 2016; Al-Quraan and Abu-Shanab, 2015; Khasawneh and Tarawneh, 2016). Such initiatives are not being extensively implemented and not adequately utilized for citizen interaction with local governments in the country. Having this, PV from such initiatives is still not clear and not widely noticeable to Jordanian citizens. In fact, when the study participants were asked if

their local government have a Facebook page or not, only half of them stated that they knew about the existence of such pages.

6.4 Citizens' Attitude Toward Government-led e-Participation Initiatives through Facebook

This section discusses the findings related to the following research question and hypotheses:

Question 3: What is citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?

Question 4: What are the factors considered relevant to influence citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?

H5. *Higher level of perceived value to be delivered from participation in government e-Participation initiatives through Facebook positively affects citizen's attitude to participate in government- led e-Participation initiatives through Facebook.*

H7. *Higher level of citizens' participation efficacy will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

H9. *Higher levels of perceived ease of use of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

H10+H11. *Higher levels of perceived usefulness and compatibility of Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

H15. *Higher levels of trust on Facebook will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

H16. *Higher levels of citizens' trust in local government will be positively related to higher levels of citizen's attitude towards government-led e-Participation initiatives through Facebook.*

To answer question 3 and based on the survey items in which Jordanians citizens were asked about their attitude toward government-led e-Participation initiatives through Facebook, it concludes, as shown in Table 40, that Jordanians citizens show relatively high positive attitude toward government-led e-Participation initiatives through Facebook. Table 40 shows the results of the means and standard deviation of the three items related to Jordanians citizens' attitude toward such initiatives which are measured on 5-point Likert scale. As a mean score for attitude items is (M=3.67), it interprets that that Jordanians citizens hold greater positive attitude towards engagement in such initiatives.

Table 40. Mean and Standard Deviation for the Internal Items of Attitude

CONSTRUCT	ITEMS	MEAN	SD
Attitude	ATT1. I believe that my participation in government-led e-Participation initiatives through Facebook is a good idea.	3.75	0.96
	ATT2. I believe that my participation in government-led e-Participation initiatives through Facebook is a wise idea.	3.62	0.98
	ATT3. I believe that my participation in government-led e-Participation initiatives through Facebook is a worthwhile idea.	3.63	1.01
	All items	3.67	0.91

Additionally, Table 41 presents the averages of responds in percentage for each degree of preference (i.e. strongly agree, agree, moderate agree, disagree, and strongly disagree) of the related items. The percentage finding indicates that more than half of Jordanian citizens considered that government-led e-Participation initiatives through Facebook is good, wise, and worthwhile idea (strongly agree and agree percentages), slightly third of them showed average attitude toward such idea (moderate agree percentages), and small portion declared that they do not believe it is valuable idea (strongly disagree and disagree percentages). Such finding suggests that in general, Jordanians citizens hold a relatively high positive attitude towards engagement in such initiatives.

Table 41. Percentage for Each Degree of Preference of Attitude Items

ITEMS	STRONGLY AGREE	AGREE	MODERATE AGREE	DISAGREE	STRONGLY DISAGREE
ATT1. I believe that my participation in government-led e-Participation initiatives through Facebook is a good idea.	24.1%	37.5%	30.3%	5.9%	2.2%
ATT2. I believe that my participation in government-led e-	18.9%	37.9%	32.7%	7.2%	3.3%

Participation initiatives through Facebook is a wise idea.					
ATT3. I believe that my participation in government-led e-Participation initiatives through Facebook is a worthwhile idea.	21%	35.4%	32.2%	8%	3.4%

Regarding question 4, six factors - PV, PE, PEOU, PU and COMP of Facebook, CT_FB, and CT_GOV - were expected to affect citizens' attitude toward government-led e-Participation initiatives. In thus, six hypotheses shown above (H5, H7, H9, H10+H11, H15, and H16) were tested.

Based on examining the path analysis results, the study provides evidences that PE, PU and COMP of Facebook, and PV are significantly and positively related to influence Jordanians citizens' attitude toward government-led e-Participation initiatives through Facebook. Meanwhile, PEOU, CT_FB, and CT_GOV have not significantly affected their attitude. Furthermore, the three antecedents of attitude (PE, PV, and PU and COMP of Facebook) explain 39.4% of the variation of Jordanian citizens' attitude toward engaging in government-led e-Participation initiatives through Facebook in the proposed model. Those findings are discussed below.

- **Significant role of participation efficacy on citizens' attitude**

The study results show that PE has a significant positive influence on Jordanian citizens' attitude toward engaging in government-led e-Participation initiatives through Facebook, a result that supported hypothesis H7. The findings reveal that PE have the strongest relationship with ATT ($\beta = 0.426$), this follow by PU and COMP of Facebook ($\beta = 0.202$), and PV ($\beta = 0.154$). The results confirm the profound influence role of PE in shaping citizens' ATT toward engaging in such initiatives. This seems rational; citizens who are more confident in their ability to participate, thus probably leads favorable attitude towards engaging in e-Participation initiatives through Facebook.

While there have been scarce (if no) prior e-Participation studies examining the contingent impacts of PE on ATT, the finding of the current study is in accordance with those reported in prior studies concerning the relationship between political efficacy and political participation (Caprara et al., 2009; Gastil and Xenos, 2010; Spaiser, 2011; Verba et al., 1995). Such studies

implicitly refer that citizen attitude toward political participation was influenced by antecedent to feelings of political efficacy.

- **Significant role of perceived usefulness and compatibility of Facebook on citizens' attitude**

The findings show that PU and COMP of Facebook had positively significant effect on citizen's attitude to participate in government-led e-Participation initiatives through Facebook ($\beta=0.202$), a result supported hypotheses H10+H11. This finding is one of scarce empirical investigations on the relationship between technological and affordance aspects of social media (Facebook) as a platform and technology intermediary that might facilitate or hinder e-Participation up-take. PU and COMP of Facebook appears very valuable to citizens since it will allow them to participate conveniently. The study results evidenced the capabilities of Facebook (represented by PU and COMP) for supporting e-Participation initiatives through shaping a positive citizens attitude, which in turn foster them to involve in e-Participation activities, this finding is previously expected by (Chouikh et al., 2016; Dini et al., 2016; Johannessen and Munkvold, 2012).

The significant effect of PU of Facebook as found in the present study is in coherence to the assertion of TAM (Davis, 1989) and DTPB (Taylor and Todd, 1995) that PU of using IS/IT systems has significant effect on ATT. The relationship between PU and ATT has received substantial empirical support into e-Participation researches, as several studies found that PU of e-Participation website/tools positively influence citizens attitude and in turn using e-Participation website/tools (Alharbi et al., 2016; Al-Hujran et al., 2014; Ali et al., 2015; Alomari, 2016; Al-Quraan and Abu-Shanab, 2015; Schaupp and Carter, 2005). Similar supporting findings are available in e-Government context; PU have a significant positive influence on citizen's attitude to use e-Government services (Al-Hujran et al., 2015; Alryalat et al., 2013a; Gupta et al., 2016; Hofmann et al., 2012; Kumar et al., 2007; Rana et al., 2013; Tan et al., 2008; Titah and Barki, 2006, 2008).

With respect to COMP, the significant impact of COMP of Facebook is in-line with the expectations of DOI (Rogers, 1995) and DTPB (Taylor and Todd, 1995). This result relatively demonstrated the "fit" and the "consistent" of Facebook technology with Jordanian citizens

existing values, needs, and lifestyle, which impacts their attitude toward engaging in government-led e-Participation initiatives through Facebook. In literature, the significant role of COMP is fairly supported as it has found to be consistently significant citizens intention to adopt online voting (Schaupp and Carter, 2005), as well as using e-Government services (Carter and Bélanger, 2005; Susanto and Goodwin, 2013).

- **Significant role of perceived value on citizens' attitude**

The findings show that PV has positively significant effects on citizen's attitude to participate in government-led e-Participation initiatives through Facebook ($\beta = 0.154$), a result supported hypothesis H5. This conforms to our expectations and reinforces the notion that PV expected to be generated from such initiatives plays significantly role in shaping citizen attitude. This finding is consistent with the assertion of TAM concerning user's acceptance of IS/IT system. According to TAM model, user's attitudes toward using a system, in part, is shaped by the expected outcomes. The significance role of PV is approved toward accepting and using e-Government (Al-Hujran et al., 2015) and mobile government services (Wang, 2014). Further, citizens will have positive attitude about participation and open government activities if they believe to gain value or benefits (Coleman et al., 2008; Nam, 2012a).

As concluding comment, the process of e-Participation is oriented to create more opportunities for collaboration and interaction among citizens and the government for reaching desirable outcomes. In fact, it is not enough to place Facebook or other social media network for the purpose of e-Participation if the government, for example, do not consider the citizens' inputs received (Bonsón et al., 2015; Macintosh and Whyte, 2008; Mergel, 2013a; Wahid and Sæbø, 2014). Consequently, as citizens become more sure that their opinions are taken into consideration, that will eventually impact their attitude toward engaging in government-led e-Participation initiatives through Facebook.

- **Insignificant role of perceived ease of use of Facebook, trust in government, and trust in Facebook on citizens' attitude**

Contrary to our expectations, PEOU of Facebook, T_FB (trust in technology), and T_GOV were not found to be significant predictors of Jordanian citizens' attitude toward government-led

e-Participation initiatives through Facebook, a result that not supported hypothesis H9, H15, and H16 respectively.

The lack of statistical significant of PEOU of Facebook on ATT is in stark contrast with related technology acceptance models and theories; TAM (Davis, 1989), DTPB (Taylor and Todd, 1995), UTUAT (Venkatesh et al., 2003), and DOI (Rogers, 1995), as they are widely approved the significant impact of PEOU on ATT. Additionally, the study result was diametrically opposed to the previous e-Participation/e-Government, where there is a strong and positive relationship between PEOU and ATT toward using e-Participation/e-Government services and applications (Al-Hujran et al., 2015; Ali et al., 2015; Alomari, 2016; Alomari et al., 2012; Alryalat et al., 2013a; Carter and Bélanger, 2005; Gupta et al., 2016; Hofmann et al., 2012; Hung et al., 2013; Powell et al., 2012; Rana et al., 2013).

Nevertheless, among those studies, it is worth noted that PEOU is still less significant than PU on citizens' ATT to use e-Participation/e-Government services, and PEOU in other studies conducted in developed and developing countries has not found to be significant predictors of intention to adopt e-Government services. For instance, PEOU does not have a direct impact on citizens' intentions to use e-voting in USA (Schaupp and Carter, 2005) and Jordanian e-Government website (Alomari et al., 2012).

The insignificance of PEOU could be explained in accordance of two reasons. **First**, as an evidence from UATUT (Venkatesh et al., 2003), the role of PEOU on user's attitude is decreasing with time and with user's experience. Venkatesh et al., (2003) provided empirical evidences that PEOU appears to be initially significant in the early stages of user's experience with the technology, then became non-significant over time. In close related argument, the user's perception and importance of system/technology PEOU differ over users characteristics such as user's education level and professional experience (Segars and Grover, 1993). Considering that and looking into the study participant's experience on Facebook (see Table 12), around two-thirds of the respondents are Facebook users for more than 4 years and spend at least one hour on the site per day. Moreover, majority of the respondents possessed college or higher degree. So, technical knowledge and skills may be a hurdle they have already overcome and hence not crucial any more.

Second, beside previous suggestion that PEOU may be an antecedent of PU rather than have direct impact on ATT or usage (Davis, 1989). The role of PEOU was found partially mediated over PV in the present study. The study found that PV has been influenced by PEOU ($\beta= 0.136$), a result that supported hypothesis H12. This means that PEOU precedes the PV and then indirectly impacts the ATT. It seems plausible that PEOU of Facebook could facilitate and enhance level of communication and interaction between citizens and their government, since citizens need lower technical skills to use Facebook compared with previous generations of ICT, which in turn reducing citizen's efforts to participate. The PEOU of Facebook might help citizens to be smoothly connected and updated with e-Participation activities, simplify receiving citizen's inputs as well government's replies, encourage citizens to generate contributions, and finally allowing them to follow up and track their contributions on the discussed issues.

The study found that CT_FB neither have significant impact on ATT nor PV, a result that not supported hypotheses H15 and H17. Prior research results demonstrate that trust in government has a more significant influence than trust in the technology (Alomari et al., 2012; Bélanger and Carter, 2008; Nam, 2014).

With respect to the role of CT_GOV in shaping citizens' attitude, the study found that CT_GOV does not have significantly influence on Jordanian citizens' attitude toward government-led e-Participation initiatives through Facebook, a result that not supported hypothesis H16. This finding is quite surprising in the sense that the integrity of e-Participation process is, in part, depend on trust on government. The finding is extremely contrary with many previous e-Participation/e-Government studies that extensively provided substantial empirical evidence that CT_GOV has strong and robust impact on citizens attitude and/or on citizens' intentions to adopt e-Participation/e-Government services (Abu-Shanab, 2014; Alomari, 2016; Bélanger and Carter, 2008; Nam, 2012a; Schaupp and Carter, 2005).

This study finding related CT_GOV could be explained, based on similar reasoning as is posited for the relationship between PEOU and ATT, that is CT_GOV may indirectly impacts the ATT over PV since the study found that CT_GOV strongly and significantly influences PV ($\beta=0.326$), a result that supported hypothesis H18. Reasonably, citizens would have more expectation of value and benefits from engaging in e-Participation initiatives as they trust more

in government. In thus, PV fully mediates the relationship between CT_GOV and ATT toward government-led e-Participation initiatives through Facebook.

6.5 Implications for Theory and Practice

6.5.1 Implications for theory

This study makes a significant contribution to e-Participation research from different perspectives.

First, the low of citizens' acceptance and engagement in government-led e-Participation initiatives through Facebook is indeed a socio-technical problem that requires different comprehensive views. Accordingly, the study following Van de Ven (2007) concept to address relevant factors to influence citizens' intention to accept and to engage in government-led e-Participation initiatives through Facebook. The concept proposed by the author identifies that a complex problem or phenomenon might exceed one specific discipline capacity and demand further contribution from other disciplines. Therefore, studying and explaining a complex problem or phenomenon (here is low level of citizens' participation) requires the engagement of more stakeholders, intended audience (here is citizens) and disciplines (i.e., sociology, e-Government , and IS) to interpret meanings and use (Van de Ven, 2007). Macintosh (2009) concurs, the studying of e-Participation from different academic perspectives provides a good support for the field progress and breadth (Macintosh et al., 2009a). They call for different research fields to be involved in doing research on e-Participation topics. Subsequently, the perspective premises in this work, can be viewed as response to that view.

Second, this study contributes to enrich the e-Participation field as it provides the opportunity for IS research to make significant contributions by engaging the complementary research cycle between e-Participation researches and IS knowledge regarding user acceptance (then after the adoption in future work). Sufficient to say that the nature of IS research focus on studying the human (users) involvement in computer systems considering the environmental context where that interaction occurs, especially when investigating user culture, social and behavior circumstances (Hirschheim, 1985).

IS discipline is showing potential contributions to advance e-Participation research (Alarabiat et al., 2016a; Macintosh et al., 2009a), similar to what earlier IS contributed to e-Government discipline (Axelsson et al., 2010). Specifically, investigating citizens' acceptance and/or adoption of e-Government systems and services (Hofmann et al., 2012; Rana et al., 2012). The study introduces IS perspective into e-Participation research through focusing on contextual factors that influence citizens' intentions and attitude to engage in government-led e-Participation initiatives through Facebook, which are seemingly still neglected in much of e-Participation research.

The study highlights that some philosophies and ideas of IS research are potentially good to use in contemporary e-Participation studies since it deals with comprehensive socio-technical aspects of a certain phenomenon, including societal and cultural trends with technological and human behavior factors (Alter, 2003; Hirschheim, 1985). So, it suggests that IS discipline knowledge could be relied on and greatly help to understand why e-Participation through social media take up by citizens is still limited. In addition, conducting further IS research into e-Participation context can provide a good basis to explain and predict citizens' acceptance and adoption of e-Participation initiatives.

Third, e-Participation field has been widely criticized for its limited theoretical developments. It has been acknowledged the lack of either theoretical, theory generating or theory testing of the field work. The theoretical premises in this work, which based on TPB, should be seen as a response to that criticism (Macintosh, et al., 2009; Sæbø et al., 2008, 2011). Thus, the methodological approach applied in the current study using TPB could be viewed as significant attempt, encouraging other researchers for adapting more theories from other well established fields.

Fourth, the existing e-Participation studies have emphasized the role of citizens (Medaglia, 2012; Sæbø et al., 2008), and demonstrated the importance of meeting their needs as one significant success factor of those initiatives (Sanchez-Nielsen and Lee, 2013). However, transcending a supply side perspective is one general challenge in e-Participation research, the field literatures has a significant gap in understanding citizens' incentives and requirements to participate (Flak et al., 2007; Sæbø et al., 2008). Thus, the study proposed a citizen-centric model specifically for e-Participation context. While the literature provides a comprehensive

citizens models in the e-Government context, there is a lack of consideration of the e-Participation component. The study is the one of few studies proposing a model particularly designed and developed for e-Participation context. So, the study represents a starting point for understanding e-Participation, particularly through social media, from point of view of the citizens.

6.5.2 Implication for Practice

From a practical perspective, the present study has significant managerial implications for government policy makers and government officials who are working on new government-led e-Participation initiatives through Facebook to predict citizens' acceptability. This also could be beneficial for those who would like to diagnose the reasons why an existing initiative is not fully acceptable to citizens and to take corrective action to increase citizens' acceptability of such initiatives.

This research sought to help Jordanian local governments to develop more successful e-Participation initiatives through Facebook by understanding the key factors (such as, ATT, PE, and PV) initiatives on Jordanian citizens e-Participation acceptance. These implications are discussed below.

Understanding the influencer factors. The study offers insight into the factors that influence citizens' intentions to participate in government-led e-Participation initiatives through Facebook. As it has been illustrated in the study, ATT, PE, PBC, PV, PEOU, PU and COMP of Facebook, and CT_GOV directly and indirectly influence citizens' intention to engage in government-led e-Participation initiatives through Facebook. These factors should be fully understood and considered as cornerstones and prerequisites for launching and developing interactive and successful government-led e-Participation initiatives through Facebook. The study outcomes are believed to assist government officials and policy makers from Jordan to better position their strategies to encourage faster and more efficient citizens' acceptability of such initiatives.

Promoting government-led e-Participation initiatives. The results showed the powerful impact of Jordanians citizens' attitude on their intention in whether to engage (or not engage) in government-led e-Participation initiatives through Facebook. Given this, widespread and attractive awareness campaigns should be performed, targeting citizens properly to acquire

their initial support and raising awareness about existing initiatives and participation opportunities for an effective and wider citizens' acceptance to such initiatives. As the study survey results found that Jordanian citizens are still not fully aware of government-led e-Participation initiatives through Facebook. In this respect, there is a lost opportunity for those local governments to reach out more citizens, especially in light of the fact that most Jordanians are active Facebook users. Therefore, building and managing strategic plans for promoting government e-Participation initiatives are needed, which would encourage and motivate citizens to engage in those initiatives.

Citizens' sense of participation efficacy. The study findings demonstrated the role of PE in shaping citizens' intention and attitude toward government-led e-Participation initiatives through Facebook. Since PE is highly pertinent to intention to participate (as well as PE impact on ATT and PV), the study results indicate that the effect trajectories of PE are more intricate than we might originally thought. Therefore, the organizers or initiators of such initiatives are advised to create more opportunities for collaboration and interaction with citizens. Local governments are encouraged to promote a collaborative environment in such initiatives through a meaningful dialogue that is based on seeing the role of citizens more as a part of decision making process rather than only information consumers. Moreover, it is imperative for organizers to instill citizens with a sense of empowerment and greater faith in change if they participate.

The role of perceived value of citizens' involvement in e-Participation initiatives. The study demonstrates the role of PV to perform positive attitude. As it has been illustrated in the study, higher PV indicates greater positive ATT. Local governments should gather aspiration by broadcasting interesting, updated, relevant and valuable information to citizens. They could raise citizens interest by additionally, discussing important issues that are in the heart of citizens' concerns. Then, there is an urgent need to ensure principles of openness, transparency, and responsiveness to illustrate how citizens' inputs and discussions are taken into consideration when it comes to decision-making processes. In other words, local governments should ensure that citizens' opinions, needs and concerns are fully understood and taken into consideration.

The effect of technological features of Facebook. The finding indicates that Jordanian citizens valued PU, COMP, and PEOU of Facebook. Such technological characteristics

of Facebook are believed to play significant role in promoting and fostering citizens' acceptance and engagement in e-Participation initiatives. Thus, Facebook site creates an active environment to increase citizen participation and using Facebook for e-Participation processes seems fertile ground in a way that makes citizens participation easier and more effective. This needs extra efforts from initiators of e-Participation to learn more and acquire necessary different technical and communication skills on using Facebook to support their interaction with citizens. The lack of such skills could prevent them from taken full advantage of Facebook as a platform or tool to enhance citizen participation.

Enhancing citizens trust. The study highlighted major concerns that citizens expressed a moderate (closer to low) level of trust in government ($M = 2.34$ as shown in Table 18). In thus, building up citizen's trust would strengthen their ATT and enhances their participation involvement indirectly. More efforts are needed by local governments through developing a long-term strategy that put forward a number of mechanisms to increase citizens trust.

6.6 Study Discussion Summary

This chapter answered and comprehensively discussed the four study questions. The chapter provided general understanding of the factors that facilitate citizens' acceptance and then engagement in government-led e-Participation initiatives through Facebook.

The discussion related to the study sample demonstrated a high perception of diversity and the study sample is believed to represent Jordan population. This significantly should increase the perceptions of external validity of the study findings. Accordingly, it breaks down several barriers towards the generalizability of the study results to Jordan population. As previous e-Participation/e-Government research conducted in Jordan had an inherited weakness in terms of ability to generalize the findings, the discussion illustrates a need to exert strenuous efforts to move toward capturing various perceptions of all segments of Jordanian society instead of falling back on students.

The study found that Jordanian citizens uphold positive attitude toward engaging in government-led e-Participation initiatives through Facebook but they show moderate intention to participate in such initiatives.

The study findings indicate that Jordanian citizens' decisions to engage in government-led e-Participation initiatives through Facebook mainly depends on ATT, PE, and PBC more than on perceived expectations of others – SN. The findings also indicate the strongest effect of citizens' ATT on intention to participate.

The study has shown the importance of PE in explaining citizens' intentions and behavior. Prior to this study, only limited number of research examined the role of PE. The results suggest that PE may provide a more comprehensive explanation in predicting citizens' intention in e-Participation through social media context more than SN. Perhaps, the role of PE diminishes the role of SN in this context. The significant effect of PE emphasized Jordanian citizens' self-confidence and enough qualifications to play an important role in the life of their community.

The discussion explains that opinions and suggestions by relevant others no longer have dominant or profound influences in citizen decision, which in result diminished the role of SN. While it is expected that citizens in Jordan are more sensitive to the social pressures and tend to be influenced by others' opinions, Jordanian citizens – in this study – have shown a highly autonomous thinking and ability to form an independent decision. This result implies that they are in pace to become more independent when they decide to take a decision, or behavior.

PV is found to play less important role in citizen acceptance decisions, as compared with that of ATT and PE. Probably, the effect of PV on intention to participate mediated over ATT. Jordanian citizens' ATT toward government-led e-Participation initiatives through Facebook, in turn, is determined by PE, PU and COMP of Facebook, and PV which in turn impact the level of intention to participate. The discussion highlighted the importance of PE in shaping citizens' ATT and validated its role on understanding Jordanian citizens' ATT and intention to engage in government-led e-Participation initiatives through Facebook. The results of this study also show that PE exerts the strongest effect on citizen attitude.

As PU and COMP of Facebook have significant role on ATT. Accordingly, Facebook seems to provide indispensable means for civic actions and strengthen interactions between citizens and government. Therefore, using Facebook site is likely to be a motivating factor for enhancing and increasing citizen participation process. Further, citizens' ATT is also determined by PV. In

thus, citizens feeling that their opinions matter will create more positive ATT, which in turn will improve the chances of more citizens' willingness to participate.

The results of this study show that PV is affected by PEOU of Facebook and CT_GOV. This suggest that PEOU of Facebook may allow and facilitate citizens' interactions with government. As more easy to use is the e-Participation tool, it would be more effective to connect citizens and governments (Lacigova et al., 2012). PEOU of Facebook may contribute for that process at which citizens can easily access to the information anywhere and anytime and enable them to keep informed about the results of such initiatives. Finally, the direct effect of general CT_GOV on citizen's ATT was insignificant, but it might be fully mediated by PV that then affected ATT. Therefore, it should not dismiss the importance of CT_GOV.

7 . CHAPTER SEVEN: STUDY CONCLUSION

7.1 Study Summary

Governments-led or “top-down” e-Participation initiatives promise change towards creating an environment where government place high value on collaboration and partnership with citizens (Macintosh and Whyte, 2006, 2008). However, such initiatives have major difficulties or deficiencies in what concerns attaining a high level of citizens’ engagement, particularly in those which are implemented through social media.

While the potential of Facebook and other social media networks to transform government interaction with citizens is widely acknowledged, the use of such networks in an effective way is not easy task, requiring more than just creating profiles to have a social media presence. Generally, there is a wide agreement that government-led e-Participation initiatives through social media have not brought the expected revolutionary outcome. Probably, this due to the lack of citizens’ acceptance to engage in those initiatives.

Citizens’ engagement in government-led e-Participation initiatives through social media is a totally voluntary activity for citizens and often surrounded by technological, personal, social, behavior, and political factors. This indicates that there are drivers or factors that bring about participation beside the availability of e-Participation tools. Such factors have to be considered and treated carefully in order to facilitate citizens’ acceptance and in turn their engagement in government-led e-Participation initiatives. A careful review which has been done in the current study concludes that such factors have not been properly explored yet. Therefore, the study investigated the relevant factors that influence citizens’ intention and attitude to accept and to engage in government-led e-Participation initiatives through Facebook. One major significant result of the study is supported by the fact that without understanding what factors affect citizens’ acceptance to be involved in those initiatives, governments will not be able to take strategic actions to increase the e-Participation up-take.

Accordingly, and since e-Participation initiatives are concerned with individuals, the theoretical framework of the study is based on the foundational psychological idea that “beliefs” formulate “attitudes”, which in turn affect “intentions” that subsequently drive “behaviors”. Such idea is well-examined and explained in the TPB, a theory that could explain why an individual may perform (or not perform) particular behaviors (Ajzen, 1991). TPB has gained wide

recognition among scholars to have a robust theoretical base for explaining and predicting an individual acceptance behavior in various contexts (Armitage and Conner, 2001; Bhattacharjee, 2012; Pavlou and Fygenson, 2006; Rana et al., 2012, 2013). The current study provided theoretical and empirical evidences to support the efficacy of TPB and verified its validity to be applied in e-Participation context.

The study used TPB theory to develop its model and more focused literature search was carried out in order to elicit key acceptance factors from related research areas. The proposed citizen's centric model includes the main constructs of TPB: Attitude (ATT), Subjective Norms (SN), Perceived Behavior Control (PBC), Behavior Intention (BI) and has been extended with a set of constructs drawn from related literature: Perceived Value of citizen's involvement in e-Participation initiatives (PV), Participation Efficacy (PE), Perceived Ease of Use of Facebook (PEOU), Perceived Usefulness of Facebook (PU), Compatibility of Facebook (COMP), Citizen Trust in Facebook (CT_FB), Citizen Trust in Government (CT_GOV), and Facilitating Conditions (FC). The study hypotheses associated with government-led e-Participation initiatives through Facebook were developed and tested via regression modelling.

The study considered the case of Jordan's local governments e-Participation initiatives through Facebook. The results of the survey of 400 Jordanian citizens suggest that the proposed model is strongly supported by the data. The study answers the following four research questions:

Question 1: What is citizens' intention to engage in government-led e-Participation initiatives through Facebook?

The study found that Jordanians citizens show a moderate intention to participate in government-led e-Participation initiatives through Facebook.

Question 2: What are the factors considered relevant to influence citizens' intentions to engage in government-led e-Participation initiatives through Facebook?

The results highlighted that citizen's ATT, PE and PBC significantly influence citizens' intention to engage in government-led e-Participation initiatives through Facebook. Further, the three factors explained 64.9% of the variance in citizens' intention

Question 3: What is citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?

The study found that Jordanians citizens show relatively high positive attitude toward government-led e-Participation initiatives through Facebook

Question 4: What are the factors considered relevant to influence citizens' attitude toward the involvement in government-led e-Participation initiatives through Facebook?

The results indicated that citizens' ATT is formed by three main determinates; PE, PU and COMP of Facebook, and PV, which explained 39.9% of the variance in the ATT.

Furthermore, the results showed that PV is affected by PE, PEOU of Facebook, and CT_GOV, which explained 27.4% in the variance of PV. Additionally, FC, which is composed by two beliefs: namely government's ability to manage e-Participation initiatives, and freedom to participate, explains 28.5% of the change in PBC.

In conclusion, the success of the implementation of the government-led e-Participation initiatives through social media is unlikely to be realized without citizens' willingness to accept and to engage in these initiatives. The study provides evidence for the significant role of the key factors (ATT, PE, PBC, PV, PEOU, PU and COMP of Facebook, and CT_GOV) on citizens' intention. Such factors have rarely been empirically tested under the e-Participation context. Consequently, it can be said that the study pave the way for better understanding the important factors that influence citizens' acceptance, which in turn can also inform the design and implementation of government-led e-Participation initiatives through social media.

7.2 Study Limitations and Future Research

As with all studies, this study has its own limitations and determinants. First, while a systematic effort for identifying relevant factors was done, as explained in study model – Section 4.3 – the set of selected factors does not include, for sure, all factors that are thought to be important for determining citizens' acceptance of e-Participation. Therefore, further studies integrating other factors would be most significant. Additionally, since this is not a cross-cultural study – as this work addresses citizens' perspective purely in the Jordanian context – different

factors might have been obtained within other national contexts. Although, the findings are believed to be applicable to other Arab or developing countries that share demographic characteristics with Jordan, these findings are not necessarily applicable to other countries. Therefore, further study in different countries would most likely strengthen and validate the current study findings. Further studies to compare the study findings with other countries may be of value in this context.

Another limitation is related to the exclusive focus on Facebook, so it remains unclear whether the study findings can be generalized to other social media platforms, such as Twitter. The current study main interest was on examining citizens' intention toward engaging in government-led e-Participation through Facebook rather than their actual participating (adoption), future research focus on the adoption topic seems very fruitful. This is believed to support academic researchers in obtaining more insights about factors that influence citizens' adoption and hence managerial insights into how to manage and enhance citizens' engagement in e-Participation initiatives.

Based on the extensive literature review presented in Chapter 3, it would be interesting to analyze the challenges and barriers facing government entities, particularly local ones, in managing e-Participation initiatives through social media. Defining challenges and barriers are vital for developing suitable strategies and practical actions. Such research stream may focus on how e-Participation initiators can effectively utilize social media networks for supporting e-Participation initiatives, perhaps conducting action research approach seem suitable in this matter, approach that is hardly found in e-Participation literature (Medaglia, 2012).

Other main extensions for future research could be prolific that is through introducing and integrating theories and practices from other research areas such as marketing and project management. This could be a major support for implementing successful e-Participation initiatives, and believed to strength the theoretical and practical implication of e-Participation research.

Finally, the impact and ramifications of social media for the purposes of e-Participation are still debated in professional and academic circles. Future research have greater emphasis on the real impact of e-Participation initiatives through social media on government decisions,

reinforcing the qualitative analysis of what changes could happen in government decisions that are based on the provided citizens' contribution.

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APPENDIXES

Appendix A. Cook Distance Value for BI

01218 .00005 .00619 .00077 .00353 .00583 .00242 .00016 .00077 .00235 .00000 .00494 .00009 .01364
.00008 .00355 .00001 .00001 .00572 .00989 .00000 .00312 .00026 .00010 .00003 .00016 .00048 .00461
.00002 .00109 .00000 .00574 .00650 .00218 .00824 .00000 .00047 .01105 .00139 .00036 .00587 .00486
.00002 .00000 .00008 .00046 .00021 .01791 .00013 .00002 .00004 .00297 .00236 .00070 .00071 .00028
.00070 .00073 .00443 .00000 .00043 .00008 .00723 .00024 .01695 .00050 .00006 .00001 .00050 .00071
.00384 .00044 .00060 .01032 .00003 .00064 .00605 .00058 .00045 .02315 .00089 .00380 .00097 .00076
.00431 .00049 .00005 .00482 .00274 .00001 .00000 .00030 .00000 .00272 .00002 .00000 .00027 .00002
.00101 .00659 .00090 .00000 .01022 .00140 .00303 .00003 .00038 .00423 .00013 .00279 .00198 .00170
.00021 .00023 .00107 .00225 .00000 .00627 .00036 .00000 .00281 .00034 .00467 .00019 .00862 .00441
.0000 .0005 .00268 .00490 .00327 .00011 .00384 .00014 .00001 .00009 .00720 .00169 .00159 .00004
.00093 .00307 .00000 .00046 .00042 .10058 .00035 .00152 .00000 .00069 .00073 .00005 .00104 .00104
.00104 .00013 .00124 .00046 .00227 .01083 .00031 .00001 .00017 .01525 .00015 .00029 .01765 .00011
.00124 .00019 .00194 .00034 .00037 .00270 .00380 .00238 .00005 .00046 .00234 .00000 .00553 .00078
.09984 .00000 .00318 .00153 .00014 .00005 .00216 .00126 .00000 .00093 .00013 .00591 .00388 .00020
.00482 .00000 .00027 .00000 .00049 .00000 .00360 .01142 .00718 .00669 .00003 .00063 .00478 .00008
.00002 .00249 .00005 .00151 .00010 .00010 .00072 .00062 .00162 .00351 .00630 .00003 .00200 .00019
.00321 .00000 .00005 .00000 .00137 .00016 .00003 .00001 .00529 .00012 .00619 .00018 .01873 .00152
.00090 .01170 .00090 .01938 .00177 .00002 .00047 .00181 .01151 .00028 .00020 .00003 .00301 .00000
.08427 .00250 .00011 .00007 .00371 .00010 .00000 .02188 .00004 .00131 .00401 .00161 .00348 .00494
.00401 .00001 .00023 .00175 .00348 .00007 .00306 .00486 .00040 .00152 .00046 .00006 .00002 .00140
.00000 .00027 .00876 .00207 .00005 .00093 .00017 .00010 .00008 .00025 .00183 .00016 .00477 .01397
.01238 .00001 .00019 .00148 .00049 .00025 .00106 .00771 .00029 .00340 .00109 .00014 .00259 .00003
.00891 .00123 .00007 .00193 .00037 .00005 .00039 .00144 .00004 .00026 .00009 .00106 .00010 .00008
.00130 .00009 .00093 .00003 .00097 .00001 .00793 .00424 .00558 .00000 .00901 .00901 .00901 .00078
.00643 .00000 .00025 .00096 .00197 .00095 .00082 .00003 .00000 .0005 .00012 .00044 .00468 .00283
.00002 .00017 .00024 .00893 .00893 .00005 .00149 .00288 .00005 .00022 .00380 .00262 .00026 .00343
.00011 .00005 .00000 .00033 .00001 .00208 .00119 .00010 .00005 .00097 .00012 .00003 .00022 .00033
.00158 .00240 .00003 .00003 .00003 .00003 .00044 .00134 .00000 .00382 .00412 .02823 .00202 .00001
.00374 .00016 .00243 .00041 .01342 .00018 .00006 .00001

Appendix B. Central Leverage Value BI

.01923 .00205 .01360 .01969 .01208 .03285 .01290 .00832 .00399 .02402 .00454 .01872 .02079 .01396
.01815 .01988 .00366 .01548 .01345 .00741 .00454 .00208 .01335 .00532 .00484 .00882 .01343 .00791
.00718 .01223 .00301 .00964 .01485 .02560 .00623 .00348 .00742 .04986 .00569 .01089 .02127 .02846
.00605 .01458 .00609 .00711 .01287 .02104 .00653 .00929 .00425 .00262 .00707 .01008 .00320 .02509
.01008 .01018 .02216 .00325 .01285 .01312 .02463 .00857 .02457 .00248 .01345 .00567 .01384 .00697
.00874 .00877 .00489 .01311 .00712 .01159 .01185 .01029 .01059 .01997 .00350 .01015 .01094 .01078
.00466 .01829 .01160 .02614 .00379 .00170 .01425 .00848 .01434 .01203 .00214 .01296 .00236 .01573
.01336 .01288 .00686 .01253 .00668 .01307 .01103 .00298 .00942 .00472 .01216 .00819 .01965
.01474.02927 .00719.00704 .00350 .00940 .00723 .01161 .04446 .00896 .00894 .03080 .00652 .01739
.01419 .00321 .01141 .02133 .00791 .00747 .01650 .01298 .01433 .00338 .01400 .01767 .01386 .02043
.00181 .05138 .01731 .00349 .01525 .00248 .03805 .01151 .00495 .01167 .01796 .01650 .01603 .01795
.01795 .01795.01612 .00538 .00465 .00939 .02119 .01624 .01695 .00440 .01370 .00546 .01843
.02364.00984 .00705 .01201 .00562 .00868 .01456 .01208 .01129 .01629 .00881 .00858 .02387 .00823
.00350 .00721 .03719 .03447 .00904 .02252 .01204 .01803 .01520 .01290 .00704 .00472 .01226 .03282
.00905 .01206 .01040 .00454 .00560 .00853 .00080 .00418 .01377 .01090 .01801 .01414 .00720 .01191
.03777 .00593 .00074 .02172 .02247 .00225 .00843.01198 .00615 .00341 .02792 .01495 .06958 .01913
.03590 .02244 .00459 .01819 .01603 .01819 .01607 .00250 .00527 .00570 .01040 .00714 .03887 .01314
.01452 .02342 .01282 .01112 .03126 .03424 .0222 .01396 .01068 .00818 .00979 .01245 .00695 .00950
.01521 .00454 .03857 .01146 .00853 .01025 .00346 .01015 .00414 .00777 .00101 .00153 .03357 .00540
.00288 .01018 .01899 .00780 .04518 .01653 .00288 .00510 .01696 .01694 .00765 .02998.00782 .00394
.00883 .00262 .01006 .00809 .02869 .00446 .00792 .01040 .00831 .01463 .00667 .00135 .01725 .00250
.03933 .01395 .02250 .00316 .01598 .02276 .01096 .00187 .00427 .01731 .02200 .01347 .00924 .01733
.00217 .00322 .01242 .00788 .01857 .01820 .01743 .00374 .01198 .02371 .00101 .01108 .00666 .01076
.01043 .01932 .00377 .01190 .00973 .00929 .00956 .00492 .01810 .00484 .01094 .00454 .01594 .01594
.01594 .01063 .01774 .00604 .00470 .00395 .03093 .01027 .01311 .00437 .01682 .00898 .00407 .01990
.00751 .01484 .00297 .00208 .01280 .01937 .01937 .00967 .03226 .02775 .00558 .00029 .01367 .01194
.00349 .01193 .00159 .01603 .01055 .00454 .00495 .00818 .01101 .00434 .01603 .02359 .00875 .00761
.01042 .00454 .00864 .00277 .00761 .00761 .00761 .00761 .00520 .01107 .00301 .02140 .01037 .03950
.00476 .00718 .00731 .02703 .01250 .00815 .01772 .00181 .00930 .00308.

Appendix C. Cook Distance Value for ATT

.00384 .00016 .00115 .00471 .00221 .01106 .00509 .00022 .00084 .00172 .00003 .00424 .01134 .00037
.00288 .00747 .00079 .00142 .00003 .00503 .00000 .00005 .00004 .00115 .00000 .00371 .00467 .00001
.00092 .00247 .00011 .00014 .00050 .00800 .00033 .00041 .00020 .05390 .00077 .00139 .00428 .01020
.00070 .00085 .00296 .00083 .00056 .01219 .00013 .00005 .00068 .00005 .00347 .00354 .00010 .00500
.00354 .00013 .01557 .00001 .00267 .00014 .00880 .00000 .00969 .00000 .00057 .00006 .00347 .00005
.00015 .00213 .00003 .00042 .00015 .00152 .00289 .00158 .00436 .00525 .00000 .00011 .00339 .00179
.00062 .00417 .00036 .00079 .00068 .00046 .00032 .00028 .00063 .00018 .00007 .00007 .00002 .00265
.00310 .00250 .00023 .00202 .00386 .00200 .00016 .00062 .00162 .00066 .00342 .00253 .00873 .00352
.00010 .00190 .00469 .00009 .00006 .00333 .00601 .00137 .00270 .00286 .01395 .00660 .00871 .00623
.00000 .02223 .00167 .00138 .00051 .00007 .00046 .00413 .00017 .00209 .00001 .00033 .00291 .00000
.01901 .00209 .00101 .00499 .00011 .00182 .00241 .00005 .00000 .00026 .00289 .00052 .00199 .00199
.00199 .00148 .00303 .00032 .00075 .00043 .00110 .00015 .00001 .00362 .00030 .00476 .01270 .00209
.00043 .00172 .00059 .00052 .00000 .00345 .00055 .00367 .00149 .00045 .00235 .00002 .00009 .00000
.04270 .00383 .00005 .01095 .00032 .00054 .00718 .00036 .00001 .00169 .00010 .00536 .00001 .00011
.00004 .00003 .00099 .00002 .00000 .00043 .00462 .00161 .00001 .00063 .00008 .00011 .00683 .00039
.00002 .00032 .00758 .00069 .00222 .00104 .00253 .00001 .00007 .00062 .00707 .00248 .01374 .00006
.00001 .01857 .00002 .01857 .01727 .00027 .00065 .00119 .00053 .00004 .00658 .00029 .00036 .00212
.00292 .00043 .01504 .00004 .01378 .00340 .00000 .00085 .00679 .00434 .00023 .00175 .00168 .00001
.00157 .00109 .00208 .00009 .00081 .00231 .00013 .00015 .00006 .00043 .00336 .00160 .00001 .00005
.00201 .00004 .04801 .00140 .00001 .00001 .00336 .00605 .00039 .00782 .00101 .00041 .00001 .00111
.00019 .00312 .00678 .00053 .00175 .00074 .00207 .00093 .00155 .00195 .00849 .00021 .00231 .00051
.01439 .00029 .00024 .00094 .01057 .00032 .00068 .00823 .00705 .00707 .00020 .00472 .00045 .00038
.00159 .00000 .00140 .00268 .00667 .00070 .00004 .00124 .00004 .00016 .00000 .00013 .00252 .00365
.00018 .00002 .00114 .00004 .00135 .00035 .00000 .00042 .00031 .00110 .00153 .00153 .00153 .00000
.00664 .00008 .00071 .00015 .02630 .00155 .00196 .00070 .00139 .00193 .00176 .00462 .00060 .00338
.00108 .00075 .00139 .00168 .00168 .00197 .02938 .01520 .00002 .00002 .00789 .00022 .00043 .00251
.00001 .00714 .00000 .00047 .00142 .00030 .00294 .00011 .00714 .00325 .00011 .00139 .00272 .00047
.00043 .00064 .00139 .00139 .00139 .00139 .00023 .00093 .00026 .00187 .00179 .02867 .00003 .00019
.00002 .00041 .00010 .00239 .00422 .00011 .00094 .00000

Appendix D. Central Leverage Value for ATT

.00331 .00278 .02786 .00884 .00757 .02890 .01532 .01947 .01046 .01304 .00897 .00904 .00867 .01705
.06680 .02488 .00791 .02760 .02412 .01167 .01278 .00170 .02619 .00508 .01016 .02436 .02052 .01117
.01125 .01277 .00753 .01679 .01058 .02715 .01014 .00647 .00968 .03330 .01212 .00768 .00924 .02389
.01236 .01545 .00878 .00836 .02029 .00952 .00858 .01462 .00557 .00322 .00808 .00869 .00763 .01718
.00869 .00986 .02662 .00549 .00936 .01630 .01253 .00283 .00512 .00389 .00822 .00915 .01935 .00789
.00637 .01273 .00216 .01580 .01112 .00820 .01016 .01313 .01437 .02965 .02184 .00577 .02377 .02328
.01324 .01499 .02063 .02294 .00398 .01491 .02010 .02124 .02323 .01670 .00201 .01363 .00642 .01029
.01435 .00897 .00751 .01794 .01283 .00558 .01316 .01509 .01271 .01032 .01738 .01158 .02556 .02669
.00653 .00740 .01044 .00362 .01077 .01449 .02708 .06682 .00659 .01799 .00658 .02895 .02164 .05860
.00765 .04076 .00849 .01306 .00664 .01623 .01942 .00571 .00711 .02178 .02468 .00678 .02111 .00544
.03615 .00758 .00411 .01058 .00565 .04257 .01174 .01730 .01862 .03858 .02626 .02678 .01522 .01522
.01522 .02482 .01051 .01119 .00918 .02252 .00912 .01159 .01291 .00660 .00760 .01404 .03388 .01659
.00676 .01731 .00917 .00780 .00955 .03707 .01459 .01841 .02150 .01122 .00981 .01276 .02946 .01033
.04459 .04635 .00764 .01977 .00662 .01252 .01222 .01219 .01478 .02688 .00582 .01770 .00610 .01788
.00509 .00897 .01883 .01009 .00661 .02245 .01514 .00594 .02230 .02515 .00833 .00971 .02342 .00112
.01210 .00858 .02925 .00769 .00386 .01303 .01324 .00612 .04262 .02012 .03734 .03603 .02477 .01855
.00973 .04992 .02563 .04992 .05056 .00244 .00934 .00433 .00712 .00953 .02031 .00202 .01162 .03048
.00869 .01391 .01267 .01527 .01022 .01340 .01436 .01238 .01809 .00715 .01689 .00499 .01135 .00623
.01634 .01848 .02256 .01305 .03072 .01848 .01336 .01183 .00146 .01319 .02363 .00827 .00248 .00313
.02051 .01262 .04883 .01582 .00248 .00334 .01679 .00994 .00348 .02865 .00368 .00164 .01090 .01386
.01057 .03219 .00842 .00363 .00744 .01114 .02845 .01514 .00866 .01235 .01171 .00591 .02077 .03153
.01219 .00103 .01670 .02285 .02804 .00790 .01240 .01598 .01837 .01492 .00368 .01146 .00473 .00670
.00433 .01348 .03570 .01615 .01532 .01003 .01752 .01435 .00178 .01376 .01137 .01409 .01378 .01419
.01301 .00724 .03028 .01743 .00516 .01328 .00588 .01379 .00671 .01884 .00936 .00936 .00936 .00897
.01773 .00446 .01045 .01846 .03129 .00582 .01210 .00504 .02067 .01294 .00748 .03002 .01441 .05935
.00409 .00666 .04144 .03291 .03291 .01142 .02991 .01737 .00518 .00194 .00792 .01979 .00252 .01160
.01017 .03164 .01532 .01326 .00762 .00300 .00589 .00656 .03164 .00593 .01649 .02026 .00597 .01326
.01110 .01126 .02026 .02026 .02026 .02026 .00562 .00761 .00497 .02397 .00631 .02199 .01357 .00850
.00995 .03791 .02003 .01216 .00965 .00483 .00586 .00484.

Appendix E. Cook Distance Value for PV

.00008 .00001 .00442 .00041 .00091 .01664 .00196 .00117 .00038 .00252 .00023 .00060 .00037 .00392
.01271 .01257 .00008 .00000 .00770 .00281 .00131 .00004 .00167 .00048 .00114 .00253 .00018 .00090
.00239 .00006 .00009 .00059 .00040 .01265 .00231 .00001 .00062 .02176 .00101 .00049 .00057 .00158
.00108 .00296 .00068 .00071 .00862 .00000 .00160 .00425 .00017 .00014 .00151 .00079 .00093 .00569
.00079 .00026 .00021 .00002 .00037 .00258 .00227 .00034 .00071 .00013 .00118 .00005 .00028 .00025
.00013 .00036 .00001 .00330 .00064 .00044 .00000 .00271 .00178 .01748 .00711 .00012 .00157 .00911
.00252 .00415 .00108 .01014 .00014 .00025 .00085 .00213 .00405 .00586 .00002 .00268 .00091 .00001
.00002 .00049 .00030 .00448 .00000 .00087 .00086 .00295 .00007 .00014 .00138 .00001 .01287 .00486
.00027 .00055 .00094 .00018 .00281 .00172 .00698 .02508 .00019 .00000 .00096 .00389 .00162 .03618
.00003 .00085 .00025 .00204 .00041 .00333 .00437 .00012 .00050 .00059 .01160 .00001 .00923 .00038
.02366 .00025 .00037 .00248 .00015 .00088 .00060 .00011 .00719 .00803 .00003 .01387 .00078 .00078
.00078 .00551 .00039 .00001 .00033 .00081 .00001 .00240 .00022 .00065 .00098 .00000 .00033 .00418
.00003 .00301 .00104 .00082 .00237 .00003 .00002 .00100 .00252 .00026 .00052 .00183 .00023 .00032
.01958 .03959 .00116 .00252 .00010 .00049 .00233 .00139 .00395 .00030 .00038 .00192 .00053 .00689
.00004 .00023 .00004 .00222 .00020 .01012 .00149 .00004 .01007 .00306 .00003 .00038 .00673 .00001
.00180 .00000 .00590 .00085 .00039 .00393 .00024 .00012 .00653 .00848 .00002 .02519 .01155 .00063
.00218 .00203 .00256 .00203 .01068 .00024 .00137 .00072 .00125 .00002 .00759 .00029 .00141 .01223
.00125 .00396 .00195 .00211 .00005 .00122 .00047 .00021 .00309 .00060 .00076 .00023 .00187 .00040
.00348 .00571 .00573 .00030 .01062 .00155 .00407 .00052 .00003 .00001 .00269 .00045 .00035 .00006
.00477 .00237 .00653 .00023 .00035 .00005 .00015 .00254 .00004 .00075 .00001 .00003 .00274 .00021
.00243 .01692 .00037 .00011 .00090 .00283 .00457 .00025 .00010 .00011 .00130 .00083 .00882 .00239
.00069 .00004 .00575 .01064 .00000 .00001 .00033 .00241 .00345 .00004 .00011 .00307 .00000 .00085
.00046 .00060 .02344 .00010 .00393 .00000 .00000 .00416 .00002 .00421 .00225 .00383 .00146 .00274
.00156 .00004 .00734 .00005 .00022 .00128 .00000 .00358 .00096 .00058 .00112 .00112 .00112 .00031
.00157 .00007 .00106 .00068 .01287 .00029 .00027 .00041 .00402 .00035 .00006 .01288 .00289 .00154
.00000 .00010 .02917 .01553 .01553 .00003 .00453 .00658 .00002 .00000 .00001 .00376 .00006 .00276
.00185 .01775 .00452 .00119 .00011 .00024 .00084 .00001 .01775 .00114 .00562 .00066 .00000 .00119
.00153 .00008 .00066 .00066 .00066 .00066 .00001 .00002 .00026 .00000 .00001 .00985 .00181 .00064
.00154 .02746 .00542 .00288 .00194 .00004 .00116 .00059.

Appendix F. Central Leverage Value for PV

.00309 .00275 .02560 .00827 .00597 .01447 .01352 .01866 .01002 .01006 .00866 .00819 .00815 .01342
.06427 .01246 .00780 .02760 .01886 .00746 .01138 .00156 .02532 .00397 .00863 .02292 .02040 .01011
.00779 .01271 .00740 .01633 .01012 .01825 .00615 .00646 .00886 .01662 .01101 .00691 .00847 .02299
.01119 .01255 .00780 .00728 .01027 .00952 .00563 .00302 .00523 .00282 .00512 .00751 .00599 .00398
.00751 .00954 .02652 .00545 .00887 .01399 .00978 .00157 .00324 .00357 .00618 .00908 .01916 .00751
.00615 .01237 .00212 .01256 .01039 .00754 .01016 .00986 .01264 .01465 .01630 .00554 .02287 .01609
.01033 .01009 .01993 .01372 .00362 .01470 .01954 .01985 .02069 .00935 .00193 .01059 .00446 .01028
.01433 .00829 .00705 .01392 .01283 .00335 .01230 .01210 .01265 .01015 .01630 .01157 .01424 .02405
.00605 .00650 .00926 .00314 .00286 .01283 .02315 .06160 .00627 .01799 .00455 .02706 .02062 .04897
.00761 .04049 .00814 .01078 .00591 .01308 .01594 .00549 .00626 .02142 .01487 .00677 .01087 .00465
.02238 .00720 .00313 .00640 .00537 .04230 .01108 .01722 .01025 .03561 .02625 .01538 .01455 .01455
.01455 .02149 .01004 .01118 .00874 .02205 .00911 .00827 .01269 .00537 .00584 .01404 .03376 .01246
.00671 .01473 .00764 .00643 .00273 .03706 .01458 .01769 .01986 .01093 .00915 .01070 .02936 .00994
.03777 .02734 .00546 .01797 .00646 .01202 .00927 .01063 .01013 .02673 .00507 .01619 .00506 .00883
.00500 .00866 .01881 .00632 .00627 .01245 .01379 .00587 .01209 .02344 .00829 .00923 .01881 .00106
.00996 .00857 .02631 .00622 .00272 .00651 .01301 .00591 .04050 .01024 .03733 .01561 .01516 .01811
.00578 .04938 .02425 .04938 .04763 .00154 .00724 .00178 .00442 .00950 .00488 .00057 .00994 .02375
.00666 .00859 .01043 .01330 .01016 .01217 .01394 .01217 .01558 .00610 .01630 .00451 .00891 .00547
.01303 .01307 .01860 .01276 .02520 .01733 .00688 .01127 .00136 .01318 .02204 .00762 .00098 .00295
.01691 .00974 .04702 .01563 .00098 .00321 .01668 .00444 .00337 .02830 .00365 .00152 .00619 .01367
.00656 .02230 .00789 .00335 .00582 .00635 .02615 .01492 .00852 .01223 .01019 .00400 .00721 .03049
.01146 .00083 .00970 .01195 .02804 .00789 .01206 .01380 .01556 .01489 .00339 .00293 .00472 .00501
.00311 .01291 .02159 .01607 .00193 .01002 .01752 .00893 .00169 .00746 .00825 .00924 .01232 .01122
.01134 .00717 .02666 .01739 .00469 .01197 .00588 .00927 .00472 .01843 .00773 .00773 .00773 .00855
.01652 .00430 .00909 .01798 .02438 .00527 .01182 .00410 .01777 .01260 .00739 .02259 .01131 .05901
.00408 .00649 .02751 .02468 .02468 .01138 .02776 .00684 .00514 .00193 .00791 .01697 .00234 .00746
.00739 .02035 .00991 .01205 .00746 .00225 .00392 .00653 .02035 .00245 .00956 .01983 .00597 .01205
.00915 .01118 .01983 .01983 .01983 .01983 .00561 .00759 .00440 .02397 .00629 .01181 .01168 .00754
.00770 .02073 .01564 .00813 .00637 .00475 .00172 .00331