

Bibliometric Study of E-Government in Kuwait

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E-government services and the utilities provided is a quite significant indicator of the best practices done by the government when measuring the life quality of its citizens. In this study we focus on articles that studied e-government practices. This Systematic-bibliometric paper will address all the articles published in SCOPUS & Google scholar, a popular database. The aim of this analysis is to present the bibliometric features of the most quoted or productive articles, writers and publications, as well as provide a systematic review of the content of these papers by highlighting the variables most frequently used with the E-Government in the country of Kuwait. This study found that the most important DVs studies were Adoption of e-Government, Actual Use, and Use Behaviour. The most important IVs were Social/ Peer/ Cultural Influences, Information Factors, Ease of Use/ Effort Expectancy, and Governmental Factors. In addition, Gender and Internet Experience were moderating variables.

Key words: *Student engagement, Tablet PCs, Bibliometric study, Systematic review.*

Introduction

E-government projects generate numerous opportunities and advantages for states, as well as for people around the world. The growing interest in e-government thus raises the question of how governments can improve the adoption and use of their online services by people. The successful adoption of ICTs, the rapid growth in Internet use and the rapid development of e-commerce in the private sector have put pressure on public organizations to interact with citizens electronically. The E-government's success, however, not only depends on the supplier side but also on the demand side and the willingness to use e-government online (Alazemi, 2018, Aljazzaf, 2019).



The concept of e-government was first developed and implemented in industrial countries. Therefore, this concept should not be automatically assumed to be appropriate for developing countries. So far, the development of electronic management in developing countries still presents major challenges. It is also expected that more effort will be required when introducing e-government to developing countries than in developed countries. In the past decade, the aims of various e-government initiatives have been to create more accessible services for citizens (Alenezi, 2015, Mirchandani, 2018).

As a result, all possible factors need to be investigated in order to explain the adoption and use of such systems by people. Many models of adoption and intention to use e-government and its extension for empirical research have therefore been proposed and applied. E-government has obviously taken place following the technological revolution in organizations and in e-commerce, following the diffusion of the Internet and the success of IS. Despite their success in the general Information System (IS) context, however, models are limited in terms of the diversity of users; all end users are uniform. End users of e-government systems are more diverse than those of e-commerce and are more likely to experience problems while interacting with e-government systems. These comparisons are of wider user classes: for example, elderly and undertrained people (Aladwani, 2013, Alazemi, 2018, Mirchandani, 2018).

IS scholarship has confirmed that technological knowledge and expertise influence users' technical abilities and management support. The research therefore argues that perceived support value is a new way of addressing the public acceptance and use in the field of the e-government system, which is an important factor in e-government acceptability, especially in developing countries like our case of study, Kuwait (Faisal, 2016, Alazemi, 2018, Khatib, 2019).

Literature Review

“Government of the people, by the people, for the people.” Abraham Lincoln, November 19, 1863.

The famous phrase was coined by Abraham Lincoln in 1863 in a reference to the democratic system. It is for the sake of their people that governments exist. Consequently, the people decide which legislation is enacted and how it is to be implemented. The words in the Lincoln expression show the influence of capitalism and should be taken into account. Every phenomenon inevitably examines the criteria for a good representative regime that takes into account elections, legislation and governance, fundamental human rights, civil rights and responsibilities, constitutionalism, party promotion, and the security of the interests of minorities. That is the true meaning of a successful administration. In contrast, with the emergence of the IT age, citizens have started to demand additional rights for their



governments; which emphasises the term “for people” more than before. The aforementioned sentence has not really changed.

We exist in an information age in which communities are required to combine their brains with engineering to accomplish demanding tasks efficiently and effectively. We have advanced from the farming age of 1800, and the industrial age of 1960, and now we have the IT age. The IT age is now emerging. The evolution of e-commerce (electronic commerce) in the private sector followed, and electronic administration was subsequently introduced. As a result, e-government and its numerous synonyms have become the natural extension of the IT era (Almarabeh and Abu Ali 2010). The technological revolution is now under threat. In the late 1990s, e-government arose as a framework for sharing experiences among practitioners (Grönlund, 2004; Horan, 2004). In order to provide the information and services to citizens electronically, governments have launched e-Government projects.

Simply put, e-government is a phenomenon linked to public information and services on government websites. This tackles market transition via internet or other digital media between the government and its people (West, 2004). The study uses the definitions by Layne and Lee, who defined it as "the use of technology by governments, and especially Web-based Internet applications in order to facilitate access and provision of government-wide information and services to citizens, business partners, employees, other agencies and government e-government," while also suggesting a variety of definitions of e-Government. Similarly, e-Government is referred to by the World Bank Group (2010) as used by IT organizations (wide area networks, the Internet and mobile devices). This description shows the importance of IT instruments and technologies that play a mediational role in creating a new partnership within civil society between governments and other institutions (i.e. residents, businesses and government agencies). Although the Web is not the only Internet application, it clearly defines many aspects of e-government.

The letter “E,” which means “Electronic,” has brought about a clear transformation in the horizon of public administration.

Nevertheless, e-government is wide-ranging and has a range of values and strategies. The concept of e-government is multidimensional and complex (Ndou, 2004), therefore, a more comprehensive understanding of how it is seen is necessary to design and implement a successful plan.

The way governments represent their people has been changed by innovation (West, 2004). Governments have begun to realize the promise of the digital revolution through the use of ICTs to boost efficiency and effectiveness. With ICT multiplication, public sectors around the world are increasingly investing in them to improve the quality of their services in line with

lower budgets, productivity and efficiency. Al Gore announced that, if they want to encourage Internet development, "governments must follow correct policies" (Al-Gore Vice-President 2000:3). The 1993 National Performance Review presents one of the first full images of e-Government. A new, less expensive government is created and re-established by IT (Schelin 2003). In line with technological evolution, e-government gives the liberal and conservative government a positive impression (Misra, 2008). A wider range of government services now offer services online to their residents. In the public sector, for instance, related programs vary from the current government data to online maintenance and taxation forms. As a result, this technological advance eased access to and contact with public services (Yue, 2010). E-government has the capacity to redefine both the public sector and public relations by promoting open communication, engagement, accountability and community discourse in the formulation of national legislation. E-Policy projects can provide governments and citizens around the world with many advantages and opportunities. Governments have achieved cost savings, increased efficiency, and developed faster and more convenient services for their citizens. E-Government benefits are immense and can be summarized as: (i) simple accessibility-people can get access to online resources 24 hours a day; (ii) monetary benefits-eliminating the need to contact government agencies physically; (iii) open benefits; (iv) fair benefits— all residents can access online services. Likewise, e-government benefits for governments have been widespread: (1) enhanced policy-making and growth by means of accurate and relevant information; (2) the processing and retrieval of data contributing to best decision-making; and (3) better management of government processes. The aspiration of governments worldwide is, however, to keep citizens at the heart of every involvement in e-government projects.

Methodology

In this study, the SCOPUS & Google Scholar database was targeted to search for the keyword “e-government / Satisfaction” in the title of the articles. On the 24th August 2019, the research found 45 articles published in Scopus in line with the search criteria. After reading and inspecting these articles, only 18 articles were related to the subject of e-government in Kuwait.

Table 1: Main research Criteria.

Search Keywords	Database	Results No.
e-government, Kuwait (in title)	G. Scholar	18
e-government, Kuwait (as a Keyword)	SCOPUS	27
Total		45
Duplicates		9
Irrelevant		18
Final Total		18

Bibliometric Review Results

This section presents five main bibliometric results: publication count per year, top cited papers, authors and journals, most productive countries, and finally keywords frequently used.

Table 2 illustrates that the top most cited article, which is entitled “The Use of the UTAUT Model in the Adoption of E-government Services in Kuwait,” gained 534 citations and placed its writers “S AlAwadhi, & A Morris” and its conference “Proceedings of the 41st annual Hawaii” in first place of the 18 articles selected. The author “AM Aladwani,” on the other hand, is in fifth place as his article gained 8 citations.

Table 2: Top cited articles, authors, and journals.

Cites	Authors	Title	Year	Source	Reference
534	S AlAwadhi, A Morris	The Use of the UTAUT Model in the Adoption of E-government Services in Kuwait	2008	Proceedings of the 41st annual Hawaii	(Alawadhi , 2008)
55	H Alenezi, A Tarhini, R Masa'deh...	Factors Affecting the Adoption of e-Government in Kuwait: A Qualitative Study.	2017	e-Government	(Alenezi et al., 2017)
41	H. Alenezi	Development of quantitative model to investigate the strategic relationship between information quality and e-government benefits	2015	Transforming Government: People, Process and Policy	(Alenezi, 2015)
11	AA Rabaai, B Zogheib, A AlShatti...	Adoption of e-government in developing countries: the case of the state of Kuwait	2017	Journal of Global Research ...	(Rabaai et al., 2017)
8	AM Aladwani	Determinants of e-government success in Kuwait	2011	Global Information Technology Management ...	(Aladwani , 2011)

Figure 1 illustrates the keywords in the selected articles through a word cloud that highlights the relative use of each word. It also shows the Keyword weight according to the frequency of use in the articles. E-Government, Kuwait, adoption, information assessment, development and services are among the hottest keywords used in these articles. Figure 2 presents the pie chart of the most productive countries and clearly shows Kuwait as the most productive. Figure 3

Table 3: Dependent Variables

	Dependent Variables	Count	%
1	Adoption of e-Government	3	13.64
2	Actual Use	2	9.09
3	Use behaviour	2	9.09
4	Appeal	1	4.55
5	Back office functions	1	4.55
6	Behaviour Intention	1	4.55
7	Control & Savings	1	4.55
8	Effective e-government	1	4.55
9	Implementing E-Services	1	4.55
10	Intension to use e-government	1	4.55
11	Organizational Performance	1	4.55
12	Personalization	1	4.55
13	Quality	1	4.55
14	Satisfaction	1	4.55
15	Smart Government	1	4.55
16	transactions	1	4.55
17	User Experience	1	4.55
18	Visit	1	4.55
	Grand Total	22	

Table 4 illustrates the main Independent Variables addressed in these studies alongside the count and their percentage out of 18. These are: Social/ Peer/ Cultural Influence, Information Factors, Ease of Use/ Effort Expectancy, Governmental Factors. The rest has less than 5 studies addressing them.

Table 4: Tablet Users

	Independent Variables	Count	%
1	Social/ Peer/ Culture Influence	9	11.25
2	Information Factors	7	8.75
3	Ease of Use/ Effort Expectancy	5	6.25
4	Governmental Factors	5	6.25
5	Facilitating Conditions	4	5.00
6	Performance expectancy	3	3.75
7	Usefulness	3	3.75
8	Financial Factors	2	2.50
9	Quality Factors	2	2.50

10	Technical Quality	2	2.50
11	Trust	2	2.50
12	Usability	2	2.50
13	Actions to Promote	1	1.25
14	Attitude	1	1.25
15	Awareness	1	1.25
16	Computer Self Efficacy	1	1.25
17	Interaction Design	1	1.25
18	Internet experience	1	1.25
19	Investment	1	1.25
20	Lack of awareness	1	1.25
21	Mindscaping	1	1.25
22	Obstacles	1	1.25
23	Perceived Privacy	1	1.25
24	Perceived Ease of Use	1	1.25
25	Perceived Quality	1	1.25
26	Perceived Security	1	1.25
27	Perceived Usefulness	1	1.25
28	Perceived Website Quality	1	1.25
29	Physical security	1	1.25
30	Prevention of unauthorized access	1	1.25
31	Procedures for reporting security breaches	1	1.25
32	Protection of information	1	1.25
33	Recommendation	1	1.25
34	Reforming bureaucracy	1	1.25
35	Repeated Visit	1	1.25
36	Requests & Records	1	1.25
37	Resident Feed Back	1	1.25
38	Security / Privacy Factors	1	1.25
39	Security and Privacy	1	1.25
40	Services offered broadness	1	1.25
41	Sound Information	1	1.25
42	Strategic Benefits	1	1.25
43	Support Quality	1	1.25
44	Transparency	1	1.25
45	Understanding of the System	1	1.25
46	Visual Design	1	1.25
	Grand Total	80	

Table 5 illustrates the main mediator variables that have been addressed throughout these articles when taking into consideration that 10 of these 18 articles did not use any mediator in their framework. Behavioural Intention and Perceived Ease of Use (PEU) were the most used variables whereas the rest were only used once.

Table 5: Mediator variables used

	Mediator Variables	Count	%
1	no	10	37.04
2	Behavioural Intention	3	11.11
3	Perceived Ease of Use (PEU)	2	7.41
4	Attitude (ATT)	1	3.70
5	Behavioural Intension (BI)	1	3.70
6	Effort Expectancy	1	3.70
7	Information Satisfaction	1	3.70
8	Information system usage	1	3.70
9	Institutional Value	1	3.70
10	Perceived Usefulness (PU)	1	3.70
11	Perceived Risk	1	3.70
12	Strategic Benefits	1	3.70
13	Support Quality Satisfaction	1	3.70
14	System Satisfaction	1	3.70
15	Trust in e-government	1	3.70
	Grand Total	27	

Table 6 illustrates the main moderator variables that have been addressed throughout these articles when taking into consideration that 12 of these 18 articles did not use any mediator in their framework. Gender and Internet experience were the most used variables whereas the rest were used less than 4 times.

Table 6: Moderator variables used

	Moderator Variables	Count	%
1	No	12	36.36%
2	Gender	5	15.15%
3	Internet experience	4	12.12%
4	Academic course	3	9.09%
5	Educational level	3	9.09%
6	Age	2	6.06%
7	Computer Experience	1	3.03%
8	Familiarity	1	3.03%
9	Information Sharing Rule	1	3.03%
10	Occupation	1	3.03%
11	Grand Total	33	
	Moderator Variables	Count	%

Subsequently, five more figures would enhance the knowledge and bridge the literature gap regarding the e-government studies in Kuwait. Figure 4 is a pie chart of the ratios of the respondents who were addressed in these studies. Mainly, citizens and employees were the users of the systems. Figure 5 would show the ratios between mandatory and voluntary users. Most of the studies addressed the voluntary cases rather than the mandatory cases.

Figure 4. Ratios of the respondents and voluntary

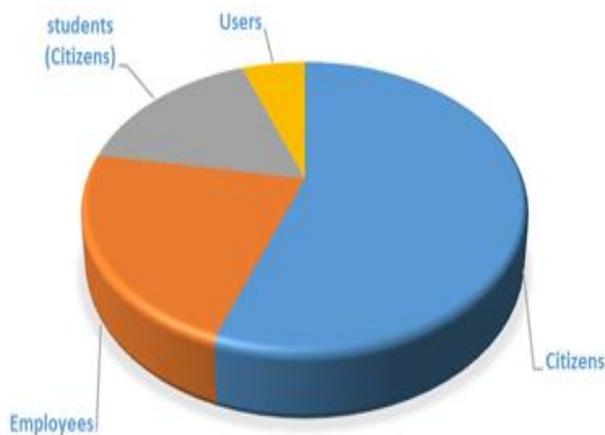


Figure 5. Ratios of mandatory

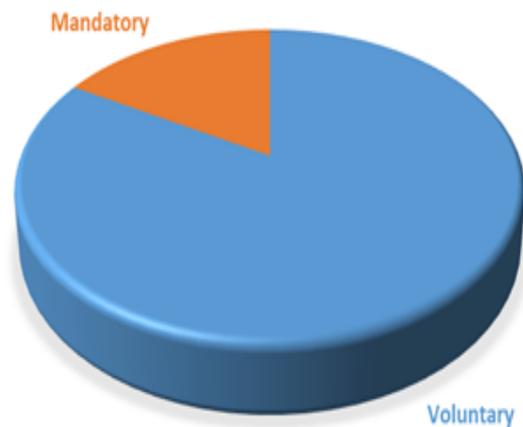


Figure 6 illustrates the main issues that are addressed in the studies. Most of the studies addressed e-government services and e-government portal usage, whereas the least addressed were the strategies of the e-government. Figure 7 illustrates the ratios of the quantitative or qualitative research method in the studies. It clearly shows that most of the studies were quantitative. Few used mix methods.

Figure 6. Main issues that is addressed in the studies

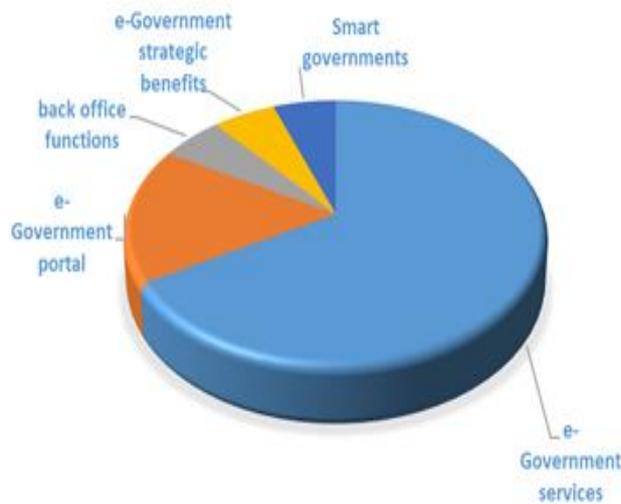


Figure 7. Databases ratios

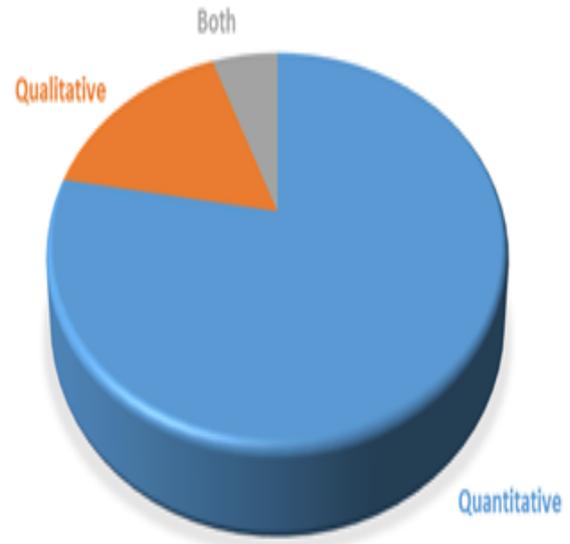
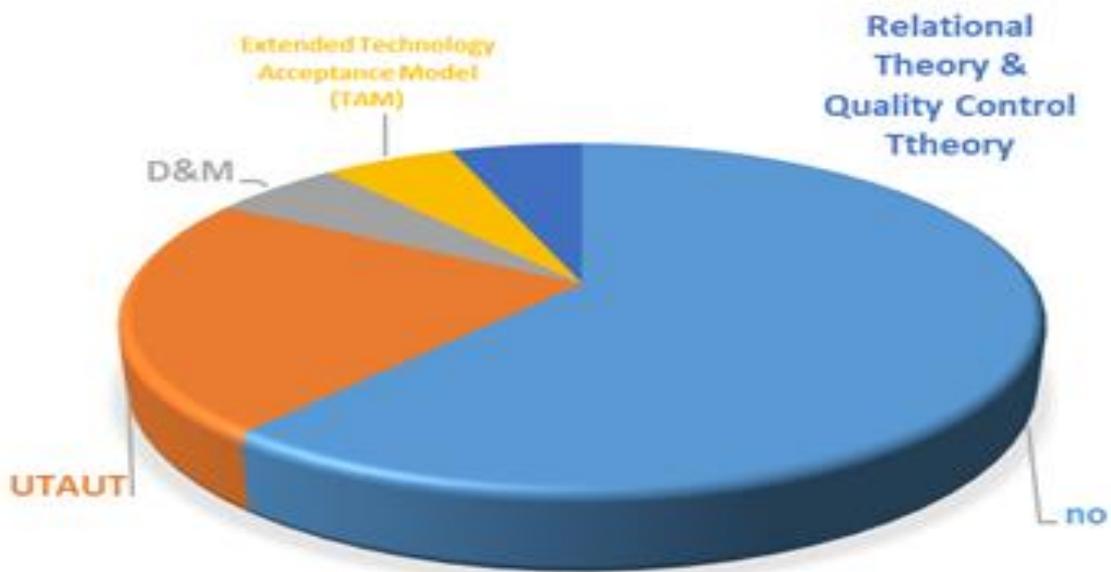


Figure 8 demonstrates the ratios of the theories used in the studies. It was noticeable that most of the studies did not mention a theatrical background. The rest generally used the UTAUT theory to justify their research.

Figure 8. Top theories used.



Limitation and Future Work



The first limitation in this study are the databases used: SCOPUS and Google Scholar. While vast and comprising only of medium to high quality peer reviewed papers, these were the only data bases considered. For future studies it is recommended to choose other data bases as well such as ISI.

Conclusion

This study dealt with the literature of e-government studies, particularly in Kuwait, and presented the bibliometric aspects of the most cited articles, authors and newspapers. It also offered systematic content reviews of these articles and identified the most frequently used independent and dependent variables.

In this System-bibliometric paper, there were five major bibliometrical results: reported numbers each year, top-cited articles, authors and journals or/and conferences, and the most important keywords used. This was clarified, demonstrated and illustrated through a word cloud. All the papers cited from the SCOPUS and the Google Scholar repositories have "E-Government and Kuwait" in the title or in the keywords.

Lastly, a systematic review was presented through the tables and illustrated the most used DVs, IVs, mediators and Moderators. In additional, 5 major pie charts demonstrated the ratios of the respondents, ratios of mandatory and voluntary users, the main issues addressed in the studies, databases ratios, and the top theories used.

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