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Towards Practical Model of Public Private Partnership (PPP) Implementation in E-Government in Jordan: Field Assessment*

Dr. Zaid Ibrahim Al-Shqairat [1] Dr. Mahmaod Ibrahim Al-Rawad[1] Dr. Mohammad Hani Al-Kilani[1]
Dr. Ata E. M. AL Shra'ah[2]
1.Al-Hussein Bin Talal University, Jordan, College of Business Administration and Economics, Department of Business Administration
2.Al Balqa Applied University, Jordan, Faculty of Business, Department of Business Administration,

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Abstract:
Purpose: The main aim of this study is to evaluate the adoption of Public Private Partnership (PPP) approach in E-Government programs in Jordan which is considered a developing country, by evaluating the second stage of the three-stage model of PPP developed by (Al-Shqairat, 2009). **Design/methodology/approach:** A mixed quantitative and qualitative research approach was adopted. Qualitative data was collected using semi structured interviews with eleven IT managers working in public organizations. Quantitative data, on the other hand, was collected using a questionnaire designed and validated for the current study. A total of 109 questionnaires were distributed to participant working in 13 different public entities. These participants were also directly involved in Public Private Partnership projects in these entities. The response rate of 56.88% percent was adequate for accuracy and the results were useful and representative of the target population. The questionnaire data was analyzed using parametric statistics including mean analysis.**Findings**: The main findings of this study shows significant support for the proposed implementation stage. Furthermore, the survey and the interview analysis highlighted that the benefits and obstacles are more important than any other aspect of the implementation stage. **Originality/ value**: This study is one of the few studies that attempted to propose and validate an empirical model of PPP Implementation in E-Government projects that could be adopted by governments while planning for a successful PPP approach in implementing E-Government initiatives in specific or an ICT related projects.
Keywords: Public Private Partnership (PPP) implementation; E-Government; Jordan; Public Sector, Private Sector, PPP forms, PPP mechanisms.

Introduction

The public and private sector alone cannot build and implement a comprehensive strategy for E –Government. As a result, a strategic collaboration that included local and international enterprises was adopted to build a long-term strategy for E-Government that depends on a partnership approach to facilitate the implementation of E-Government projects from its inception through risk sharing, promoting innovation, shared technology and decreasing costs (Al-Shqairat, & Altarawneh, 2011; Ministry of Information and Communications Technology, 2013).

E-Government services conceptualization are not limited only to government institutions as core service providers and other entities as service recipients but rather there is an involvement of a third party working under the strict norms of accessibility and quality which are prescribed, regulated and managed by the government (Eaton et al, 2006). PPP was developed as a re-arrangement of private sector and public sector roles. The core of public-private cooperation is a blend of private capital, private project execution and the delivery of public services and facilities (Ismail, 2013).

PPP arrangements have a combination of social and commercial aspect. The public sector's objectives in investing in PPP are social welfare, bridging the digital divide, developing entrepreneurship and e-governance, and improving the effectiveness of Government agencies' transactions while the private sector receives a satisfactory level of returns on their PPP investment and has resources to meet the challenge of implementing PPP (Singh, 2011, Amritesh et al., 2013, Datta & Saxetia, 2013 & Imail, 2013).

It is becoming increasingly difficult to ignore the benefits that can be gained from using the PPP approach. For example, by using PPP, governments could encourage creative problem solving, facilitate creative and innovative approaches, facilitate risk taking, improve risk management, and bring private sector skills and experiences to the public sector. These benefits will make the public sector more efficient, transparent and make public services more accessible to citizens and businesses (Akintoye et al., 2005; Weerakkody, et al., 2011; Babatunde et al., 2012; Devkar & Kalidindi, 2013).

As a result of its benefits, Public Private Partnership (PPP) has been widely adopted by governments around the world as an effective and innovative strategy to develop their public sector's organizational infrastructure that is mainly focused on but not limited to the Information Communication Technology (ICT)

field. This public and private partnership will enable both parties to learn from each other. (Bagchi & Paik, 2001). The adoption of PPP by governments took different forms such as, Management Contracts which give the private sector the right of managing government projects fully or partially. The different forms of PPP also include business process outsourcing (BPO) which is the delivery of government services by the private sector. In addition, Lease Contracts are an arrangement where the project is built by the government and then leased to the private sector for a specified fixed period of time. Build-Furthermore, Transfer-Lease (BTL) contracts are an arrangement where the project is built by the private sector and then it is transferred to the government to lease to another private sector entitiy for a specified fixed period of time. PPPs sometimes adopt concessions contracts by granting monopoly rights to a specific private company to operate government projects for a specified fixed period of time, or by using Design-build-operate (DBO) contracts which is the designing, building and operating of government projects by the private sector for a specific period of time. Build-operate-transfer (BOT) projects on the other hand, are an arrangement where the private sector builds the enterprise then exploits and operates it and then transfers it to the public sector at the end of a specified fixed period of time. Build-transfer-operate (BTO) projects are arrangements where the private sector builds an enterprise then transfers its ownership to the public sector while retaining the rights to exploit and operate it for a specified period. Furthermore, some PPPs allow the private sector to build the enterprise and retain ownership and then exploit it, operate it and then transfer its ownership to the public sector in an arrangement called Build-Own-Operate-Transfer (BOOT). , In another arrangement called Built-Own-Operate (BOO), the private sector builds the enterprise, owns, exploits and then operates it on its own account (Al-Shqairat, 2009; Ismail, 2013).

In the same vein, PPP implementations have encountered t some difficulties and raised some issues for governments that include,, conflict of interests between public and private sectors, loss of control and authority, the lack of clear output standards, lack of transparency, the lack of standardized models and uncertainty (Bagchi & Paik, 2001; Sachs et al., 2007; The Institute for Public-Private Partnerships, 2009). Other difficulties were also highlighted by researchers which included, . lack of proper and supportive legislation, rigid structures, internal political problems, strict processes and procedures, lack of communication and collaboration, lack of trust, unanticipated and long delays, resistance by employees, and confusion over government objectives and evaluation criteria (Bing et al., 2005; Amritesh et al., 2013; Weerakkody et al., 2011).

There is no magical way to adopt and implement PPP successfully. There are however several factors that can facilitate its success which include, a high level of cooperation and mutual support between partners, patience from both partners based on a mutual interest in the long term investment of the project, and continuously monitoring the progress (Bagchi & Paik, 2001). Accordingly, the purpose of the current study is to develop and validate a research instrument that can be used to assess the implementation stage of the PPP adopted model and to provide an empirical support of the Al-Shqairat's proposed model.

The partnership in E-Government model (3 PEG)

There was a vital debate about the role of PPP in E-Government implementation. the debate however was missing the main point of proposing a practical model for PPP's role in defining the complete picture about the steps of adopting PPP approach. Langford & Harrison (2001) argued that; establishing a management framework for the partnership was one of the most important challenges especially in E-Government implementation. Accordingly, some researchers such as Al-Shqairat (2009) attempted to propose a model through which governments can successfully implement PPP in E-Government projects. Al–Shqairat's model of Partnership in E-Government (3 PEG) that is mentioned in figure (1) posted three main stages that should be considered by government while implementing PPP in E government projects.

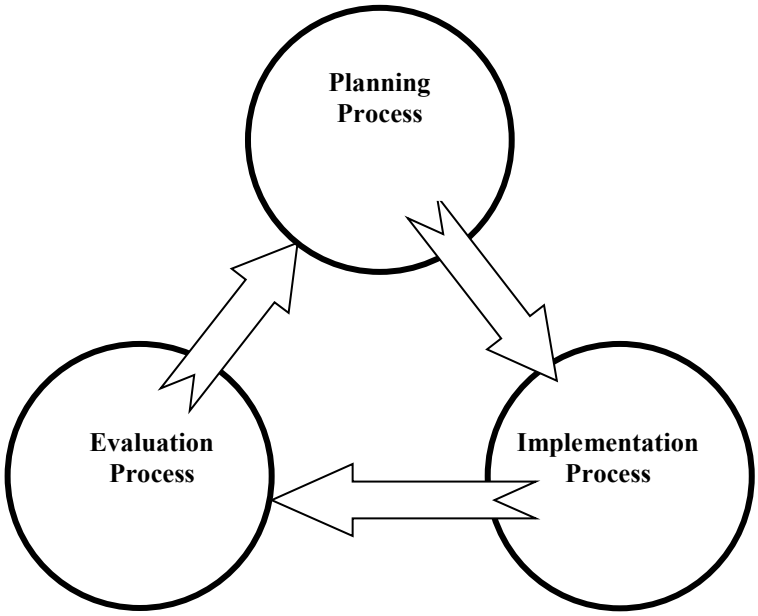

Figure 1: 3 PEG model, adapted from: Al-Shqairat, 2009

According to the 3PEG model, PPP successful implementation should go through three major stages.

- Firstly, is the planning stage which is where government projects should define a comprehensive outline of the PPP approach, determine PPP justifications, identify PPP requirements, understand the main aspects of PPP, visualization of the strategic dimensions of PPP and have an awareness of PPP readiness.
- Secondly, is the implementation stage, which deals with other aspects that should be considered such as, defining the available forms of PPP, specifying the available areas of PPP adoption, awareness of the benefits of PPP, awareness of the barriers that hinder the successful implementation of PPP and identifying the mechanisms that facilitate PPP implementation.
- Finally is the evaluation stage, although it normally comes at the end of the project, the feedback from this stage is very crucial for future implementation. =The evaluation stage for PPP in E-Government implementation should consider assessing the progress of PPP aspects and the realization and developing the main aspects of PPP in the future.

The Al-Shqairat et al. (2014) study reported significant support for all the planning stage dimensions. There were some elements of the study that received higher priority than others that included elements such as PPP concept, requirements, and readiness. The study also reported the need for refining the planning stage to include two main phases. The initial phase represents the crucial elements of the planning stage including concept, requirements. The supportive phase included PPP aspects, justifications and opportunities.

Furthermore, the implementation stage of PPP in E-Government projects is one of the most important stages that needs additional investigation in order to find a practicable model to apply in Jordan. Al-Shqairat,(2009) suggested to academic researchers that there is a need for further investigation of PPP's role in E-Government, particularly in Jordan and in other developing countries in order to understand the current implementation of such role and to evaluate its effect on the success and failure of E-Government projects. There is also a need for future research to assess the planning stage, the implementation stage, and the evaluation stage.

The unique contribution of this study is that it highlights the importance of the implementation stage of PPP in E-government as well as offering practical evidence concerning the investigation of its aspects that can be lead to applicable sub-model for 3 PEG model, in order to progress the lifecycle of PPP's three stages, planning, implementation and evaluation.

The implementation stage model for the partnership in E-Government

According to the implementation stage of the Al-Shqairat's 3 PEG model, that is illustrated in figure (2), the debate about the PPP forms that can be utilized in E-Government implementation in Jordan included the following: International Corporation (IC) contracts with the international private companies, Business Process Outsourcing (BPO), Build, Operate, Transfer (BOT), Build, Operate and Sustain (BOS) which is the building, operating and maintaining of government projects by private sector, Build, Operate and Own (BOO), Build, Transfer and Operate (BTO), Build, Operate, Own and Transfer (BOOT), Build, Operate, Sustain and Transfer (BOST) which is the building, operating and maintaining of government projects by private sector then

transferring them to the government at the end of the agreed period of time., The final arrangements were United and Twins Projects.

The local ICT sector in Jordan can be promoted and leveraged through the direct contacts and sub-contracts with the international companies. The local IT sector should however be aware of the need to act as an interface for local and international companies for both private and public organizations as well as individuals in Jordan. Many international companies lack local cultural understanding which could lead to problems and misunderstanding with local companies. The local IT sector in Jordan should help smooth out these cross-cultural issues. .

Most of the previous PPP forms started in the private sector in the implementation stage of PPP projects and then the projects were transferred to the public sector to either run them or transfer them to other private partners. As a result, there was a realization locally that Jordanian E-Government programs can adopt any of the previous forms of PPP in implementing projects in Jordan. Some PPP forms need special procedures from the government in order to share revenue with private partners. There needs to be a change in the Jordanian financial system to allow the government to share revenue that is related to service delivery with private partners.

The E-Government programs that did not generate some of e-projects that require different stages of PPP forms according to their expected advantages and risks were BOT, BTO, BOOT and BOST. PPP projects can target E-Government programs in several areas including, the decision making process, problem solving, developing of policies, areas of finance, integrating services, managing IT systems. E-projects are generally appropriate areas that can open the doors for E-Government programs to adopt PPP projects in order to benefit from the innovative experience of private partners. Information is an important and vital resource for all partners involved in E-Government implementation of PPP. Those partners include governments, public sector agencies and private sector organizations. Information exchange between public sector agencies and their private partners is one of the most important areas of PPP projects in E-Government implementation.

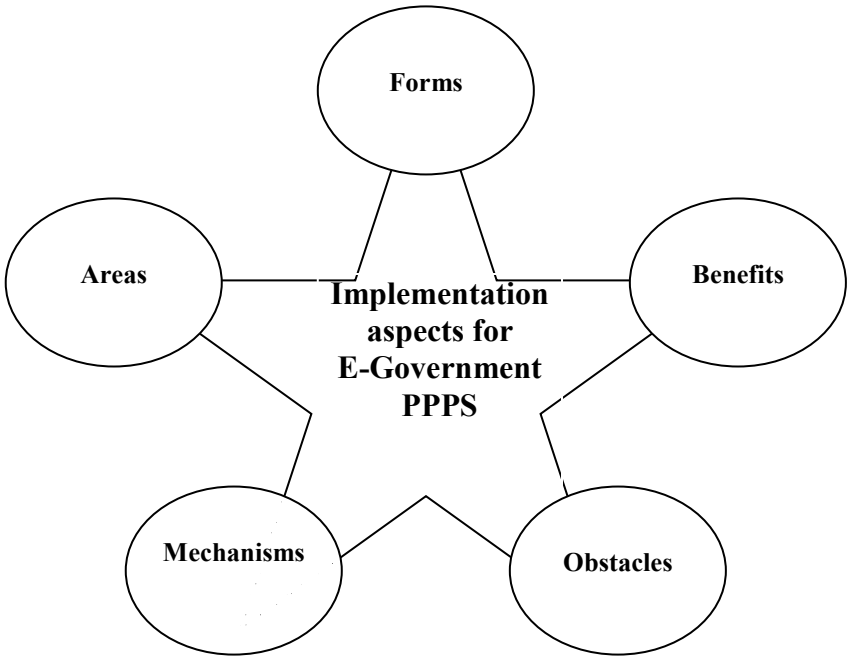

Figure 2: The five aspects of implantation for E-Government PPPs, adapted from: Al-Shqairat, 2009

There are several ways that PPP projects can benefit the public sector. Those benefits include: improving human resources capacities; developing processes and systems, achieving cost in productivity by reducing the cost of E-Government projects, attainment of financial support, gaining innovative experience, enhancing the outcomes of its projects.

In addition, PPP enables public sector to reduce the work load of its institutions which will result in financial savings and lessons the burden on human resources. These savings in resources can then be invested in other projects that cannot be shared with the private sector.

Likewise, several benefits can also be achieved by private sector from the partnership including; improving capabilities particularly in public ICT field , developing its products and services locally and globally, lessoning the burden on human resources by using trained public sector employees in PPP projects and increasing ICT projects investments locally and globally.

Therefore, the PPP benefits in E-Government implementation can be simultaneously shared by all partners as this integration strikes a balance between each partner's strengths and weaknesses. This integration

also builds economically based knowledge by attracting investment opportunities and developing more partnerships. The integration between partners furthermore enhances knowledge transfer between sectors and achieves proficiency for all partners.

Despite their benefits, PPPs have encountered some obstacles from the local and global environments including, lack of proper and supportive legislation and regulations in the public sector (e.g. government financial system), lack of increase in employees' salary to reflect this change, lack of sharing or duplication of information between public agencies, lack of a change management role, and a blur of public agencies' role in the E-Government programs and PPP projects as a whole. In addition, PPP obstacles also included the developmental gap between the public and private sector particularly in ICT field. In addition, there is a leadership dilemma as to who will lead the PPP projects between the public and private sectors which could cause some conflicts. There is also a lack of trust from international partners in collaborating with local firms because of the perceived instability in the Middle East region.

Regarding the Jordanian situation , E-Government projects adopted many mechanisms as an instruments or ways to activate the PPP implementation practice, that included, partnership contracts, joint committees, risks management, knowledge exchange, partnership agreements, partnership councils, memorandums of understanding t followed by instructive memos and special joint task forces to arrange short term partnerships.

PPP mechanisms allow partners to facilitate, coordinate, and provide PPP reports to the partners that help in dealing with unanticipated problems and to better predicting the expected risks in the implementation stage. These mechanisms will also enable all partners to ensure the continuous information exchange between them and deepen cooperation as well as enhance trust between them.

Research Methodology

Both Qualitative and Quantitative approaches were used to collect data for the current research. The qualitative method depended on semi structured interviews as a research instrument and quantitative method depended on survey questionnaire as a research instrument. The triangulation technique was used so the two different research methods for data collection can support and verify each other. (Silverman, 2000). This enables the researchers to validate the proposed model using quantitative data to obtain detailed information regarding PPP. Furthermore, the collected information from the interviews which are the qualitative data could act as a mean to validate the quantitative research results. The following is a detailed description of the methods and procedures used in the current research.

Qualitative Method

The researchers decided to interview all the information technology departments' managers in all the twelve public organizations that have been targeted in the research project. All the organizations have been contacted by the first author either by the e-mail or the telephone to set up a meeting with the study participants(the departments managers) Nine out of the twelve organizations accepted our request to interview their employees and two organizations allowed us to interview two of their employees. The interviews were semi structured in their format and conducted using a topic guide with main questions that included the following: forms of PPP, Areas of PPP, Benefits of PPP, PPP Obstacles and the Mechanisms of PPP.

Eleven participants were interviewed by the first author at their place of employment which were the nine public organizations. Four of the participants were working as managers of information technology department; six were head of divisions related to that department, while one of them was not in a managerial position. The participants were involved in E-Government PPP projects and they were practitioners in such projects. Four of them were females, seven were males, and nine of them specialized in information technology or computer engineering as shown in Table (1). The interviews lasted between twenty one and fifty minutes with an average of thirty four minutes and the participants' experience was between five and twenty three years with an average of twelve years.

Table 1: Respondents' distribution according to their specialist field

Gender	IT specialists	Non IT related
Male	6	1
Female	3	1
Total	9	2

The participants were asked to give their consent to record their interviews. Three of them consented to have their interviews recorded. The written interviews and the transcripts have been analyzed using a process of thematic coding by using NVivo software, to identify key themes and concepts emerging from the qualitative data.

Quantitative Method

To test the proposed implementation model of PPP in E –Government projects empirically, a specific questionnaire was designed to collect the data in order to test the various implementation stage aspects proposed by the model. The following are details regarding the quantitative method used in the current study.

Quantitative Tool (The Survey)

The collection of empirical data regarding the current research included the distribution of a questionnaire to the study population. For the purposes of the current research a questionnaire was designed and validated to obtain government employees' feedback regarding aspects of PPP implementation stage. Respondents were requested to indicate their preference for each aspect based on a four- point Likert scale with four choices ranging from disagrees to strongly agree (Carr et al., 1996). The four-point Likert scale was used instead of the five-point Likert scale to avoid a neutral response**.** A neutral response does not provide any practical purposes regarding the respondent's preference and is of no benefit to the current study. (Darby, 2008).The respondents were highly experienced people in PPP based projects, who have extensive knowledge about PPP approach, and they will definitely have response about PPP implementation.

The Research Population and the Sample

The participants were employees in 13 different public entities that have been identified as having direct involvement in PPP. 109 questionnaires were distributed to employees working in these entities. The Ministry of Industry and Trade (MIT) which was one of the entities in the study was excluded based on their request.
From 109 distributed questionnaires, a total of 62 were returned, which represent a response rate of 56.88%. Table (2) provides the gender and managerial position distribution of the current research respondents.

Table 2: Respondents' distribution according to their management position

Gender	Assist General Secretary	General Manager	Project Manager	Information Manager	Consultant	Clerk	Other	Total
Male	2	1	2	3	0	16	15	39
Female	0	0	1	2	2	12	6	23
Total	2	1	3	5	2	28	21	62

The respondents' distribution and the entity they work for are shown in Table (3).The number of projects that each respondent was involved in is shown in Table (4).

Table 3: The Distribution of the Entities

Source	Frequency	Percentage	Accumulative percentage
Ministry of planning	4	6.4	6.4
National Broadband Network	2	3.3	9.7
E-Government Program	2	3.3	13
Ministry of Water	3	4.8	17.8
Ministry of General Works and Housing	10	16.1	33.9
Greater Amman Municipality	20	32.2	66.1
Ministry of Power	4	6.4	72.5
Electricity Regulatory Commission	-	-	72.5
Ministry of Transport	1	1.7	74.2
The general tenders department	5	8	82.2
Ministry of Environment	1	1.7	83.9
Ministry of municipalities	10	16.1	100

Table 4: The Number of PPP Project Involved in the entities

Number of PPP projects	Frequency	%	Accumulative percentage
Less than 3 projects	15	24.3	24.3
From 3 up to 6 projects	14	22.6	46.9
From 7 up to 10 projects	8	13	59.9
More than 10 projects	20	32	91.9
Missing value	5	8.1	100
Total	62	100%	

Cronbach's alpha was used to assess reliability. The results obtained from the Cronbach's alpha test are shown in Table (5). It appears from this table that the entire used measures for the selected variables exceeded

the cut-off value and scored over 0.6 which is regarded as satisfactory level in social sciences (Malhotra & Birks, 2006).

Table 5: Cronbach's Alpha for all Measurement Scales

Variable	Number of Items	Cronbach's Alpha
Forms	7	0.758
Areas	4	0.699
Benefits	4	0.823
Obstacles	7	0.859
Mechanisms	3	0.671
Development Solutions	8	0.873

Discussion and Results

An initial objective of the project was to develop and validate a research instrument that can be used to assess the implementation stage of the PPP adopted model. Another objective was to provide empirical support for the proposed model. Therefore, data from 62 questionnaires was collected and tested for measures of reliability and analysis in line with the research adopted model of PPP by using statistical techniques including; mean and SD analysis. Table (6) shows the summary statistics for mean analysis for all the model variables. As stated earlier, the four -points likert scale was used in the current research questionnaire and coded as follow: 1 disagree, 2 somewhat agree, 3 moderately agree, and 4 strongly agree.

It is clear from table 6 that all the model variable's means scored more than 2. Therefore, , there is positive support for all the model variables which represent empirical support for the proposed PPP model. These results also supported the interview analysis which will be discussed later. However, the means scores also suggest some variation in the importance of each studied variables.

For instance, benefits and obstacles scored slightly higher than 3 (moderately agree) while other variables including: forms, areas, mechanism scored around 2 (somewhat agree). This clearly suggests that the respondents assign more importance to the benefits and obstacles than any other aspect of the implementation stage. SD analysis of variance, further shows that none of the differences in the mean score between all the groups is significant. Accordingly, the importance of all the studied variables in the implementation stage were established regardless the type of entity.

Table 6: Comparison of the Model Variables, Means and Standard Deviations for each group of respondents according to the respondent's place of work.

Variable		All respondents	Ministry	Public entity	Government Department
Forms	***Mean***	2.09	2.07	2.05	2.26
	SD	0.61	0.57	0.52	0.78
	N	56	29	15	12
Areas	***Mean***	2.86	2.88	2.63	3.08
	SD	0.64	0.75	0.45	0.46
	N	60	34	13	13
Benefits	***Mean***	3.09	3.14	2.72	3.38
	SD	0.71	0.70	0.74	0.60
	N	62	34	15	13
Obstacles	***Mean***	3.09	2.97	2.93	3.48
	SD	0.68	0.60	0.82	0.53
	N	61	33	15	13
Mechanisms	***Mean***	2.50	2.59	2.27	2.59
	SD	0.75	0.80	0.60	0.80
	N	48	30	15	13

To further validate the current research results, a group comparison has been carried out based on the number of projects the selected entity has undertaken, was involved or is currently involved in. Four different groups have been identified as follow, the first group were entities with less than 3 projects, the second group were entities involved in projects between 3 to 6, the third groups consisted of entities with 7 to 10 projects, and fourth group were entities with a portfolio of more than 10 PPP projects.

Table 7: Comparison of the Model Variables means and standard deviations for each group of respondents according to the number of projects that has been carried out

Variable		All Respondents	Number of Projects Being held			
			Less than 3	3 to 6	7 to 10	More than 10
Forms	***Mean***	2.09	1.97	2.04	1.93	2.22
	SD	0.61	0.63	0.54	0.75	0.68
	N	57	13	13	8	18
Areas	***Mean***	2.86	2.39	3.13	3.06	2.86
	SD	0.64	0.79	0.46	0.48	0.57
	N	60	14	13	8	19
Benefits	***Mean***	3.09	2.97	3.27	3.09	3.04
	SD	0.71	0.76	0.65	0.68	0.75
	N	64	15	14	8	20
Obstacles	***Mean***	3.09	3.02	3.10	3.43	3.11
	SD	0.68	0.72	0.49	0.63	0.71
	N	62	14	14	8	20
Mechanisms	***Mean***	2.49	2.33	2.51	2.62	2.40
	SD	0.75	0.69	0.54	1.03	0.81
	N	50	13	13	8	19

As Table (7) shows there is no significant difference in the importance of the adoption model variables for all tested groups. SD analysis also confirms the mean score results.

In the same vein, the current study used a semi structured interview method to gain a deeper understanding of the implementation stage and to enable the researchers to confirm the survey results regarding the studied model. Thus, a total of eleven participants representing nine public entities were interviewed. The interview sample included several managerial and non managerial positions working in different departments with most working in IT. All participants were directly involved or recently have been involved in E-Government PPP projects. The written interviews and the transcripts have been analyzed using a process of thematic coding to identify key themes and concepts emerging from the data. The following are some of the main themes that emerged from the analysis of the interviews.

A common view amongst interviewees was that a successful PPP adoption in general and in E-Government projects specifically should focus more attention to all implementation stage aspects but special attention should be paid to the benefits and obstacles because both will motivate decision maker and the government to be more serious when considering PPP approach. In fact, several interviewees highlighted the benefits that have been achieved from PPP. For example, , The head of computer Division in The general tenders' department states: *"The adoption of PPP approach in E-Government programs in our department achieved several benefits, such as, innovative experience exchange, Knowledge management exchange, enhancing our employees and divisions performance"*. Others have also supported this view, including the Deputy Head of Information Technology at Electricity Regulatory Commission who added "*PPP has helped us to facile and develop our processes through using the latest technological fashions, thus, we were able to deliver new projects, and develop and operate our infrastructure efficiently"*.

Similar to PPP benefits, obstacles were important to several interviewees. For instance, the Head of E-Government Division and the Head of Projects Management Division in the Department of Information Technology in the Greater Amman Municipality: stated that *"we have faced some obstacles while carrying out our programs through PPP. Including, change resistance from the departments and their employees, also the organizational structure does not allow new managerial arrangements that comes from PPP projects…"*. Other interviewees have also highlighted the importance of PPP implementation obstacles in hindering the success of their projects, including the head of computer Division in The general tenders' department who added that: *"in our department, partnership projects face several obstacles, including: the lack of the financial support from the government budget to generate more projects that should be carried out through the private sector, the surrounded awful external environment does not encourage the international companies to invest in Jordan and Middle East region as a general, the existence of unknown abilities and unqualified small private companies in ICT field and the fear to engage in any partnership arrangement by some of public sector entities"*

In addition, another theme emerged from the interviews that focused on the limitation of using one form of PPP or using PPP in one area of services, such as, using only BOT or BOO in financial or decision making area. In fact, most of the interviewees agreed that using different forms and areas will provide a wider range of options to organizations for implementing PPP, which will then increase the benefits and reduce any obstacles that the organization may face during the implementation process. Talking about this issue an interviewee said: *"in our Ministry there was a need to use several forms of PPP in performing E-Government*

programs, which include Outsourcing, BOT, BOO, to be able to deliver e-services. In his attempt to demonstrate the use of several forms of PPP the interviewee also added, *"…. in some occasions we had to, first, consult privet sector regarding our IT infrastructure and after we have done the consultation bidding procedures we have then lunched for building the required IT systems and maintain it for specific period of time through PPP contracts. Furthermore, employees training should be supplied also using PPP"* (Head of Information Technology at the Ministry of Environment).

In the same vein, a Maintenance Engineer in the National *Broadband* Network (NBN) program in the Ministry of Communication and Information Technology declared that: *"to implement our projects; we had to utilize several PPP forms, including, outsourcing, lease, maintenance and infrastructure contracts in order to be able to implement our projects successfully".* As stated earlier,, using one form could present a major problem for implementation and will restrict the organizations' plans of PPP implantation.

The mechanisms of PPP have also received some attention from our interviewed sample. In fact, interviewees regarded PPP mechanisms as a set of tools that aimed to enable them to establish and collaborate successfully with private sector and also maintain the relationship with the private sector. f As stated by the Manager of programs and projects management in the E-Government Program in the Ministry of information and communication technology *"PPPs implementation practices are activated by a wide arrange of different instruments including, Programs evaluation, relationships enhancing, increasing partnership types, and engaging all stakeholders.* She also added that *"…our partnership with private sector is activated through the continuous evaluation of the target projects to make sure that the partners are committing with the contracts guidelines, enhancing the association with our partners and increasing the partnership projects themselves".*

Finally, the results of the survey analyses and the themes that emerged from the interviewed sample have empirically tested and confirmed the validity of the tested PPP implementation model.

Conclusion

In recent years, governments around the world started to acknowledge and realized the benefit that could be achieved from collaborating with the private sector. However, the means for facilitating such partnership did not take its final form until recently. The reason for this could be that the public and private sectors differ greatly in their characteristics, aims, and objectives, thus, having one specific form of PPP would not have been feasible. Therefore, to facilitate the partnership between both sectors in E-Government implementation different forms, areas and mechanisms of partnerships were created and developed based on sectors' needs and requirements, including, BOO, BOT, BPO, BTO, BOOT, and BOST which would later form the current concept of public private partnership (PPP).

Accordingly, a complex concept such as PPP should be understood and studied carefully from practitioners and researchers in order for it to be adopted and used efficiently. However, little attention has been paid to the field of PPP and most studies in this field have only focused on the theoretical aspects of PPP (e.g. Babatunde et al., 2012; Devkar & Kalidindi, 2013; Ismail, 2013, Ogunsanmi, 2014) focused on the critical successful factors (CSFs) that contribute to implementation of PPP projects,(e.g. PPP process management in India), realistic assessment of the cost and benefits, favorable framework, and stable macroeconomic conditions (e.g.in Nigeria), good governance, commitment of the public and private sectors (e.g.in Malaysia).

Al-Shqairat, (2009) also, proposed a theoretical PPP adoption model (3PEG) that consists of three main stages; planning, implementation and evaluation. Therefore, , the current study was developed as a is part of a major research project to empirically test Al-Shqairat' 3PEG adoption model. Accordingly, this project was undertaken to design and validate research instruments to test the implementation stage of the 3PEG adoption model and to provide empirical support for the proposed model.

The results of this study indicated significant support for all implementation stage aspects. Furthermore, the survey and the interview analysis have shown that both benefits and obstacles are more important than any other aspect of the implementation stage. It seems possible that these results are due to the fact that both aspects plays a major role in motivating decision maker and governments to be more serious when considering PPP.

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