E-government and accountability
How to mitigate the disorders and dysfunctions of accountability relationships

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Abstract

Purpose – Electronic government (e-government) is perceived as an effective tool to enhance accountability in public organizations. However, e-government implementation to enhance accountability is still unclear and involves many complex processes because of the multiple accountabilities disorder. The e-government elements that contribute to mitigate the disorders and dysfunctions of accountability relationships are still underdeveloped in the current literature. This paper aims to provide understanding on how e-government enhances public organizations’ accountability by highlighting the key elements of e-government that mitigate the disorders and dysfunctions of accountability relationships.

Design/methodology/approach – This study adopts a qualitative case study approach by using the case of Jordan Customs. Data were collected using a triangulation approach that involved semi-structured interviews, document reviews and observation.

Findings – The findings revealed that the e-government elements that mitigate the disorders and dysfunctions of accountability relationships are classified into three contexts, namely, technological, environmental and organizational aspects. The technological elements include systems integration, single window and electronic connectivity. The environmental elements embrace public participation and partnership council. The organizational elements comprise having well-defined strategic plan and risk management approach.

Research limitations/implications – This study contributes and gives further insight into how to address the confusion, fuzziness and dysfunctions in accountability relationships existing in the literature by providing several success elements that mitigate the problematic of disorder between accountability relationships in public organizations. The paper highlights the need to investigate further elements, particularly, in the organizational context, to assist public organizations in improving their performance to enhance accountability in their operations.

Practical implications – This study provides guidelines for future e-government implementation strategy in public organizations, particularly, in the context of developing countries, as most of the recent studies of e-government in developing countries indicated that they are suffering from difficulty of managing e-government implementation to promote accountability successfully and are struggling with a lack of resources and experiences to handle this new trend of technology.

Originality/value – This study is of a significant value, as it is one of the preliminary studies that empirically extend the accountability dimensions suggested by Koppell (2005) with the key success elements of e-government that enhance accountability proposed by Heeks (1998b) and other current literature. This paper enriches the body of literature by providing some new key success elements of e-government that enhance accountability in public organizations. It also contributes to the expansion of the boundaries of knowledge by adding further interpretation on how these elements reduce the existing confusions and dysfunctions in accountability relationships.

Keywords Accountability, E-government, Multiple accountabilities disorder

Paper type Research paper
1. Introduction

Accountability has been widely recognized as a fundamental value for good governance in public organizations (Aman et al., 2013; Haque and Pathrannarakul, 2013). It is a key requirement for public administration reform (Dubnick, 2002). Ray (2012) claims that accountability is one of the primary aspects of public organizations that ensures proper functioning and increases monitoring by the main stakeholders. It also safeguards the effectiveness of public administrators by obliging them to deliver on their promises, perform as expected and bear the consequences of failure (Bovens and Schillemans, 2011).

Many governments worldwide in both developed and developing countries have strived to focus on enhancing accountability in their agenda for the reform of public administration by adopting several initiatives (Sarker, 2009). One of the initiatives that has attracted much attention from academics, professionals and international organizations is electronic government or e-government, which is seen as an effective tool that holds promise for promoting accountability and achieving the desired public administration reform (Bataineh and Abu-Shanab, 2016). According to Heeks (1998a, p. 1):

If 'electronic government' means anything, it means the use of IT to help deliver the goals of public sector reform. These goals can include decentralization, higher quality public services [...] and increased accountability that will make public servants more accountable for their decisions and actions.

During the past two decades, the e-government initiative has been considered by many scholars as an effective tool for enhancing accountability as it can bridge the communication gap between public agencies and people (Chen et al., 2006). It can also increase the interaction between government and the public by engaging them in matters of state and enhancing responsiveness to their demands and needs (Bataineh and Abu-Shanab, 2016), improve the delivery of public services (Ray, 2012) and reinforce compliance with laws and regulations and strengthen control over officials, thereby reducing corruption (Aladwani, 2016; Elbahnasawy, 2014; Kim, 2014; Krishnan et al., 2013). E-government can also increase openness and transparency (Halachmi and Greiling, 2013). Because of these capacities, many countries have attempted to implement e-government projects to benefit from its potential to achieve the intended goals of reform and increase the desired level of accountability in government actions (Andersen, 2009; Bataineh and Abu-Shanab, 2016; Cuillier and Piotrowski, 2009).

Although e-government holds a great promise to enhance accountability and reform public administrations, several studies (Chen et al., 2010; Lourenco et al., 2017; Griffin and Halpin, 2005; Petrakaki et al., 2009) indicate that it is still unclear and involves many complex processes, particularly in developing countries (Hamiduzzaman, 2012). According to Heeks (1998a); and Petrakaki et al. (2009), the complexity between e-government and accountability can be attributed to the ambiguity in accountability concept itself, where public organizations have multiple accountability relationships with a wide range of different stakeholders. This results in public organizations finding themselves under the multiple strain of trying to meet the different demands of a range of stakeholders that are most likely to be in conflict with each other. This makes it more difficult for public organizations to be accountable to all of them simultaneously. Koppel (2005) describes this situation as “multiple accountabilities disorder” in the sense that organizations that are accountable to various parties experience difficulty in executing concomitantly the orders of senior staff, responding to the demands and needs of clients and complying with laws and regulations. Therefore, this conflict of relationships may be detrimental to the accountability of organizations and cause them to fail in this regard. The enhancement of accountability
through e-government is not exception of this disorder. For instance, Heeks (1998a) states that in many cases, the implementation of e-government does not achieve a balance between these accountability relationships, in the sense that e-government does not meet the conflicting demands of different stakeholders; rather, it increases complexity and undermines accountability. Petarakaki et al. (2009) also support this point. Consequently, the critical question is raised here: how do public organizations manage accountability issues when e-government is being implemented? (Smith et al., 2010). However, a little is known about how e-government enhances accountability in public organizations, which is still a vague issue for both academics and government managers in many nations (Chen et al., 2010; Lourenco et al., 2017; Orelli et al., 2010; Pina et al., 2010a).

During the past two decades, Jordan transformed toward democratization and establishment of good governance. Since King Abdullah assumed the throne in 1999, His Majesty has given high priority to the reform and modernization of all sectors in Jordan on the economic, social and political levels. He has sought to democratize Jordanian society and has directed and encouraged all successive governments to reform public administration by focusing on the values of good governance, including transparency and accountability, the fight against corruption and the rule of law to maintain the society clean and establish an environment that reflects the rule of law, equity, equality, participation of citizens, accountability and the openness of the government and its closeness to citizens (www.kingabdullah.jo). In almost all designation letters to successive government, King Abdullah II has directed the government to adhere to accountability and encouraged them to take the required programs that enhance this concept to reform public sector in Jordan (JPM, 2003).

To implement the royal vision, the Jordanian Government has set accountability as a forward-looking goal to achieve in its national agenda (2006-2015) to reform the public sector. In addition, the Jordanian Government has adopted a number of initiatives and programs to achieve accountability, modernization and the desired reform. One of these initiatives is the e-government program. This program was established in alignment with the goals of the national agenda to ensure transparency and accountability in the Jordanian public sector (MOICT, 2006).

Despite the progress made in the first stages of implementing e-government in Jordan, it is being held back by many obstacles (Abu-Samaha and Abdel Samad, 2007; Al Nagi and Hamdan, 2009). Similarly, Belwal and Al-Zoubi (2008) indicate that while the efforts of the Jordanian government to enhance e-governance concepts are praiseworthy, there are still some obstacles to overcome particularly with regard to governance values, including accountability. The e-government initiative has been implemented in all public institutions in Jordan with the aim of achieving the objectives of the Jordanian national agenda. However, accountability in most Jordanian public organizations is still unrealized. This is evident in the report published by Al Hayat Center for Civil Society Development (RASED, 2014), an independent and non-governmental organization interested in assessing the accountability and transparency of the public sector in Jordan, which argues that the Jordanian Government is not committed to enhancing accountability and transparency through its initiatives. The report also states that the contribution of the e-government initiative to meeting the government’s commitment to enhancing accountability has been very limited, and in fact, its commitment has declined (RASED, 2014). In addition, the results of e-government surveys issued by the United Nations (UN, 2008, 2010, 2012) show that Jordan’s rank in implementing and developing open e-government systems has fallen sharply to position 98 in 2012 from position 51 in 2010 and 50 in 2008. Moreover, according to Transparency International (TI) reports (TI, 2011, 2012), which assesses “Corruption Perceptions” i.e. measures of abuse by vested authority for personal benefit, Jordan was
ranked 56 in 2011 compared to 50 in 2010. In 2012, the TI report ranked Jordan in 58th position, a loss of 8 positions from its 50th position in 2010 (TI, 2012). It is worth mentioning here that the 2012 TI report recommended that the Jordanian Government must increase transparency and accountability in public organizations in the country.

Although the fact that the enhancement of accountability through e-government is still unrealized in most public organizations in Jordan, the Customs Department is an exceptional case, as it would appear to have successfully implemented e-government systems and accountability. The implementation of e-government to enhance accountability in Jordan Customs has been perceived as a success story and best practices by several international organizations (ESCWA, 2011; UNECE, 2012; USAID, 2011b, 2015a; WCO, 2011). They have recommended to adopt Jordan customs experience as a good example to strengthen accountability (IDB, 2010; OECD, 2010).

While many countries worldwide have identified accountability as a priority of e-government agenda and have implemented, many governments, particularly developing countries, do not have enough understanding and experience of managing e-government projects to achieve the intended and desirable goals such as accountability (Aladwani, 2016; Bataineh and Abu-Shanab, 2016; Heeks and Bailur, 2007; Muller and Skau, 2015; Yildiz, 2012; Zhang et al., 2014). Yet, there is a lack of empirical evidence to assist decision-makers in understanding how e-government enhances public organizations’ accountability (Chen et al., 2010; Halachmi, 2011). Findings of previous studies indicate that our understanding of the successful implementation of e-government to promote accountability is largely based upon understanding the success elements of e-government that contribute to mitigate the disorders and dysfunctions of accountability relationships (Heeks, 1998b; Pina et al., 2010a; Wong and Welch, 2004). However, these elements that mitigate the disorders and dysfunctions of accountability relationships in public organizations are among the key issues that are still poorly understood in the existing literature, which indicates that there is a great need for further research. Therefore, this study aims to provide the understanding on how e-government mitigates the disorders and dysfunctions of accountability relationships by using a case of Jordan Customs. Specifically, this paper addresses two questions on what are the elements of e-government that mitigate the disorders of accountability relationships, and how these elements enhance accountability. This study is significant particularly in the context of developing countries, as most of the recent studies of e-government in developing countries indicated that they are suffering from difficulty of managing e-government implementation to promote accountability successfully and are struggling with a lack of resources and experiences to handle this new trend of technology (Halachmi and Greiling, 2013).

This paper proceeds as follows: Section 2 provides review of existing literature about the research context. Section 3 presents the methodology used in this study and background of e-government and accountability in Jordan Customs. This is followed by a description of findings and discussion in Section 4. Finally, Section 5 concludes the paper.

2. Literature review

2.1 Understanding accountability and multiple accountabilities disorder theory

Accountability is:

[...] a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgment, and the actor may face consequences (Bovens, 2007, p. 450).
The concept of accountability in public organizations has been developed in the early 1940s from the famous debate of Friedrich (1940) and Finer (1941), which commonly known as “the Friedrich-Finer debate”. Their debate is often referred to as a seminal basis on how public organizations are accountable in modern democratic governments (Al-Habil, 2011; Bovens, 2010; Bovens and Schillemans, 2011; Dubnick, 2002; Romzek and Ingraham, 2000). Friedrich (1940) believes that the public officials should not be accountable to external sources such as politicians, legislators or judicial process, rather they should be accountable to their colleagues who are internal administrators and familiar with standards, norms and work process and have an adequate knowledge to judge the work actions and achieve the goals. Thus, Friedrich (1940) suggests that the public officials are accountable for their action based on norms, professionalism and moral standards. He argues that these norms and standards constitute internal mechanisms to control public officials’ actions and to create a sense of responsibility and accountability.

In contrast, Finer (1941) believes that the accountability in public organizations could only be held through external controls by the elected representatives, politicians, hierarchy and judicial mechanisms rather than professional standards and sense of responsibility. Finer (1941) argues that the control of professionals could lead to corruption in public organizations. He states that public officials cannot decide alone what is an appropriate for public interest, and they should be accountable to the elected representative to the public, and thereby, unwanted conduct should be punished.

The dispute in Friedrich–Finer debate has left the discussion open with regard to the mechanisms of accountability in public organizations. Friedrich (1940) approach focuses on internal norms, professionalism, moral standards, and sense of responsibility to the internal administrator. Whilst, Finer (1941) approach emphasizes on external controls through elected representatives, politicians, hierarchy and judicial mechanisms as a viable way to ensure accountability in public organizations.

Following Friedrich–Finer debate, several theoretical bases have been made to describe the nature, dimensions, forms and types of accountability in public organizations, such as theory of bureaucracy (Weber, 1948), theory of bureaucratic authoritarianism (O’Donnell, 1998), agency theory (Williamson, 1975) and institutional theory (DiMaggio and Powell, 1983; Scott, 1987). These theories have remained in most of the recent accountability literature. A number of efforts have been made to develop frameworks based on these theoretical perspectives to make sense of accountability typologies. For instance, Romzek and Ingraham (2000) suggested four types of accountabilities, namely, bureaucratic, professional, legal and political. They argued that the bureaucratic accountability reflects the commitment with the rules and procedures, professional accountability refers to follow the professional norms and integrity, legal accountability represents the relationship between principal and agent and concerns with different forms of oversight and political accountability concentrates on the responsiveness to the constituents. Similarly, Brinkerhoff (2004) expounded that accountability could be divided into three categories: democratic, performance and financial accountability. Another researcher, Behn (2001) also sorted accountability into four categories: finances, fairness, check on abuse of power and performance accountability. More broadly, accountability also classified into internal and external forms (Huque, 2011; Ray, 2012). Internal accountability emphasizes on compliance with the rules, laws, codes of conduct and regulations of the government, as well as observance hierarchical commands (Huque, 2011; Wang, 2002), and external accountability dictates the presence of external reviewers of the performance of individuals or organizations. Those reviewers could be legislative committees, parliament, opposition political parties, courts and oversight bodies such as the audit bureau, interest groups,
media and the general public (Abu-Bakar and Saleh, 2011; Griffin and Halpin, 2005; Huque, 2011; Koppell, 2005; Petrakaki et al., 2009). Such reviewers can exercise control and oblige the public of officials concerned to achieve the tasks efficiently (Ray, 2012).

Bovens (2007) provides different classification of accountability based on who is accountable, for what and to whom. He stated that accountability can be classified based on four key perspectives: first, on the nature of the reviewers or principals "whom is held accountable"; here, accountability is divided into administrative, political, legal, professional and social forms; second, based on who is accountable; in this regard, accountability can be seen as corporate, hierarchical, individual and collective accountability; third, dependent on the conduct or "for what is held accountable"; in this typology, accountability considers financial, product and procedural accountability; fourth, dependent on the type of obligation between the actor and the reviewers or principals where accountability is classified as vertical, horizontal and diagonal accountability.

Many scholars (Heeks, 1998a; Koppell, 2005; Petrakaki et al., 2009; Ray, 2012; Romzek and Ingraham, 2000) state that such accountability classifications highlight a wide range of different, somewhat confusing and complex relationships that often cause dysfunction of accountability. Heeks (1998a) added that these classifications of accountability make it difficult to identify "who is accountable for what and to whom." Moreover, these contradictory accountability relationships make it difficult to meet conflicting expectations. As Koppell (2005, p. 95) claimed that "organizations trying to meet conflicting expectations are likely to be dysfunctional, pleasing no one while trying to please everyone." Therefore, this conflict of accountability relationships may detriment accountability of organizations and cause failure in every imaginable way. As Koppell and Ingraham (2009) found that the political and bureaucratic accountabilities conflicted with the dictates of legal and professional accountabilities. Hence, accountability, here accountability is divided into administrative, political, legal, professional and social forms. Secondly, based on who is accountable; in this regard, accountability can be seen as corporate, hierarchical, individual and collective accountability; third, dependent on the conduct or "for what is held accountable"; in this typology, accountability considers financial, product and procedural accountability; fourth, dependent on the type of obligation between the actor and the reviewers or principals where accountability is classified as vertical, horizontal and diagonal accountability.
According to Koppell (2005), these dimensions provide better understanding and an improvement on the existing conceptual fuzziness in the theory about accountability concept and mitigate the conflict among disparate conceptions of accountability relationships. He argued that the combining of these dimensions together is essential to assess accountability of any organization or individuals. He also noted that to consider an organization is accountable, this is based largely on the degree in taking these dimensions in mind. Koppell posited a critical question for each dimension of accountability to distinguish among them, and they serve as a practical evaluation to assess each dimension of accountability. Table I shows these dimensions and the questions.

Our theoretical basis draws on Koppell’s (2005) framework, which is found useful not only to address the confusion and dysfunctions among disparate accountability relationships but also suitable to understand how e-government enhance accountability in public organizations (Aman et al., 2013). Despite Koppell’s (2005) attempt to address the conflict of accountability concept in electronic environment in a case study of Internet Corporation for Assigned Names and Numbers, he did not investigate how electronic systems enhance accountability and did not illustrate what elements are enhancing these dimensions. Therefore, our study contributes to extend Koppell’s accountability dimensions with the key areas for a successful implementation of e-government that enhances accountability suggested by (Heeks, 1998b) to provide better understanding on how e-government mitigates the disorders and dysfunctions of accountability relationships. Heeks (1998b) developed a framework drawing on the socio-technical theory (Bell and Wood-Harper, 1998; Kling, 1987; Walsham, 1993) to identify elements that determine the influence of information technology (IT) systems on accountability outcomes in public organizations. He argues that e-government as information system is a part of a broad social system that has influence on accountability outcomes through IT and information systems implementation. According to Heeks (1998b), the impact of e-government on accountability outcomes is determined mainly by three key contexts: technological, organizational and environmental elements, as shown in Figure 1. He added that these contexts can be seen to have dual effect (undermine or enhance) on accountability as determinants of success or failure of accountability through IT systems. However, all elements of e-government that influence on accountability suggested by Heeks (1998b) have a broad concept. For example, in environmental elements, there are “economic, political, institutional, socio-cultural, and technical” elements, and this is the same for technological elements which comprise “hardware, software, and telecommunications elements”. Thus, we argue that these elements in this broad sense cannot provide in-depth interpretation about how these elements could enhance accountability in public organizations. Therefore, this study contributes at a conceptual level to extend the understanding in theory by extending the accountability dimensions suggested by (Koppell, 2005) with the key success elements of e-government that enhance accountability which suggested by (Heeks, 1998b) to provide in-depth understanding on how the success elements of e-government enhance accountability.

<table>
<thead>
<tr>
<th>Accountability Dimensions</th>
<th>Key determination (Koppell, 2005)</th>
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<tbody>
<tr>
<td>Transparency</td>
<td>Did the organization reveal the facts of its performance?</td>
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<td>Liability</td>
<td>Did the organization face consequences for its performance?</td>
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<tr>
<td>Controllability</td>
<td>Did the organization do what the principal desired?</td>
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<tr>
<td>Responsibility</td>
<td>Did the organization follow the rules?</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>Did the organization fulfill the substantive expectation (demand/need)?</td>
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</table>
The classification provided by this study offers a better contextual understanding of the key success element for implementing e-government to enhance accountability by revealing the key areas that have an effectual influence.

2.3 E-government and accountability
Many scholars (Ahn and Bretschneider, 2011; Pina et al., 2010b; Bertot et al., 2012; Kim et al., 2009) and several international organizations have considered e-government as an effective tool to enhance accountability. For instance, Yildiz (2007) stated that e-government seeks to promote accountability and transparency in public organizations, engages stakeholders and accommodates the public will in the information era. The United Nation (UN, 2012) also highlighted that e-government is a means to improve supervision, monitoring, transparency and accountability in public organizations. Moreover, Roberts (2006) noted that e-government can enable government information to be more available to all stakeholders in less time and cost. More information available in a timely manner is expected to enhance government transparency, and thus, the performance of public organizations becomes more accountable (Torres et al., 2005; Wong and Welch, 2004).

Chen et al. (2010) have discussed the potentials of e-government in enhancing accountability in the public organizations through four main points. First, it is clear that accountability relationships in public organizations are multiple and sometimes, particularly for external actors, indefinite. Thus, the e-government systems can assist public organizations in being flexible and in accelerating accountability relationships. In this sense, e-government helps public organizations to be accountable in multiple senses for all stakeholders simultaneously. Second, the e-government systems are characterized by sophistication, intelligence and integration. This gives the opportunity to provide information in the way tailored to different stakeholders, which allows them to monitor and review the performance of public organizations in an effective and timely manner. Third, the e-government systems have a huge possibility to distinguish themselves from the traditional systems in performance monitoring across different departments of public organizations. Hence, it can serve as a tool to control over variability of performance. Fourth,
e-government itself can be considered as one of new components of public organization’s performance, particularly when oriented to the external environment. In other words, it is not alternative to other services, but it is a distinctive and new way to provide more accountable and transparent services.

Pina et al. (2009) argued that e-government has a special advantage as an instrument to enhance accountability and participation of citizen, thus allowing citizens’ engagement in decision-making process, indirectly, through providing information to enable citizens as “voters” to assess and choose the elected officials in government. Thus, e-government may strengthen accountability of government and improve attention of citizens to government closely (Justice et al., 2006). Therefore, e-government is considered as a positive channel to encourage the public trust in public organizations (Pina et al., 2009; Torres et al., 2005; Welch et al., 2005) through allowing the public to interact with the government, empowering them to be closer and give them the opportunity to monitor the government’s performance closely (Wong and Welch, 2004). From this view, e-government can be seen as a powerful tool to enhance government’s accountability in terms of political participation of citizens (Rodríguez Bolívar et al., 2007).

Although the interest in accountability within e-government research has been steadily growing since 2008 (Lourenco et al., 2017), these efforts are inadequate to address the disorders of accountability relationships. The existing literature abounds with studies that address a variety of elements that contribute to success of e-government implementation in various areas of e-government, such as adoption and implementation (Al-Azri et al., 2010; AL-Naimat et al., 2013), intention to use (Hussein et al., 2011); models of e-government (Nabafu and Maiga, 2012); strategies (Gil-García and Pardo, 2005); service delivery and users’ satisfaction (Saha et al., 2010); e-participation (Bataineh and Abu-Shanab, 2016); public value (Karunasena and Deng, 2012); net benefits (Scott and Golden, 2009); and assimilation and the business value (Hossain et al., 2011). However, only few studies have focused on the elements that are essential for e-government implementations to be able to enhance the accountability (Ray, 2012) but limited to the technological and process elements that enhance accountability in public services. Scholars (Halachmi, 2011; Heeks, 1998b; Ray, 2012) emphasized that enhancing accountability through implementing e-government is not merely about the technological aspects; rather, it is contingent upon understanding other organizational and environmental elements that need to be understood more clearly. Despite some studies (Heeks, 1998b; Pina et al., 2010a; Wong and Welch, 2004) that have recommended investigating the influence of organizational and environmental elements on e-government implementation in terms of enhancing accountability, there is a lack of previous research on how these elements promote accountability in public organizations.

Table II summarizes the previous studies that addressed e-government implementation in enhancing accountability, which assists to highlight some issues and gap in the existing literature. Several research studies on e-government (Corojan and Criado, 2012; Haque and Pathrannarakul, 2013; Justice et al., 2006; Pina et al., 2007, 2009, 2010a, 2010b, Wong and Welch, 2004) are limited because they investigate accountability by focusing on only two dimensions of accountability, namely, transparency and interaction as key predictors of accountability. However, there are other significant dimensions that should be considered when assessing accountability in public organizations, such as liability, which refers to facing consequences, and responsibility for obligation with the laws and rules, which are considered imperative dimensions for accountability (Bovens, 2007; Koppell, 2005). Although Wong and Welch (2004) recommended the expansion of accountability dimensions when addressed through e-government, these dimensions have been ignored in
Table II. Previous studies addressed e-government implementation in enhancement accountability

<table>
<thead>
<tr>
<th>Author</th>
<th>Origin</th>
<th>Methodology</th>
<th>Description</th>
<th>Main Findings</th>
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<tbody>
<tr>
<td>Wong and Welch (2004)</td>
<td>International</td>
<td>Website content analysis</td>
<td>Studied the influence of e-government on public administration accountability, by investigate the effect of the contextual and organizational elements on websites of public organizations</td>
<td>E-government accountability associated with the bureaucracy concept more than its simple technology</td>
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<td></td>
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<td></td>
<td>Future research should seek to pinpoint the effect of organizational elements on e-government to enhance accountability</td>
<td>Future research should seek also to expansion of accountability dimensions when addressed through e-government</td>
</tr>
<tr>
<td>Griffin and Halpin (2005)</td>
<td>UK</td>
<td>Case study</td>
<td>Investigate accountability for e-government implementation. By propose framework to evaluate e-government accountability, which include: (a) main stakeholders, (b) scrutiny mechanisms, (c) penalties, (d) joined-up accountability, and (e) political issues</td>
<td>There are complexities linked with measure accountability of e-government</td>
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<tr>
<td>Perez et al. (2005)</td>
<td>EU countries</td>
<td>Website content analysis</td>
<td>Explore whether public organizations realize the importance of its websites to provide financial information to citizens as a type of accountability</td>
<td>Public organizations are not yet using its website as a tool for revealing financial information to enhance accountability to citizens</td>
</tr>
<tr>
<td>Justice et al. (2006)</td>
<td>USA</td>
<td>Website content analysis</td>
<td>Suggested criteria to provide understanding about e-government potentials for enhancing fiscal accountability and responsiveness for citizens via government’s websites</td>
<td>E-governments potentials not yet fully exploited regarding to enhancing accountability and public participation</td>
</tr>
<tr>
<td>Justice et al. (2006)</td>
<td>USA</td>
<td>Website content analysis</td>
<td>Suggested criteria to provide understanding about e-government potentials for enhancing fiscal accountability and responsiveness for citizens via government’s websites</td>
<td>The effect of e-government in enhancing accountability is still unclear matter</td>
</tr>
<tr>
<td>Rodriguez Bolivar et al. (2007)</td>
<td>Spain</td>
<td>Website content analysis</td>
<td>Assesses to what extent the e-government enhance accountability in public organizations, to control of government by the public, promote public discussion, and increased trust between them</td>
<td>Introduction of IT not had a significant impact on accountability in practice</td>
</tr>
<tr>
<td>Pina et al. (2007)</td>
<td>International</td>
<td>Website content analysis</td>
<td>Assesses to what extent the e-government enhance accountability in public organizations, to control of government by the public, promote public discussion, and increased trust between them</td>
<td>Governments still not aware the contribution of e-government in enhancing financial accountability</td>
</tr>
<tr>
<td>Pina et al. (2009)</td>
<td>EU countries</td>
<td>Website content analysis</td>
<td>Assesses to what extent the e-government enhance accountability in public organizations, to control of government by the public, promote public discussion, and increased trust between them</td>
<td>Financial accountability by e-government is not achieved in a high degree</td>
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<td></td>
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<td>Compared the development of the websites between 2004 and 2007, to determine the progress in e-government to enhance accountability</td>
<td>There is progress in e-government implementation to enhance accountability, However, “it is still overlapped with the public administration style”</td>
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<tr>
<td>Author</td>
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<td>Methodology</td>
<td>Description</td>
<td>Main Findings</td>
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<td>Petrakaki et al. (2009)</td>
<td>Greece</td>
<td>Interviews, observation and documentation</td>
<td>Explore how performance monitoring technologies are used in e-government initiative and the results that may arise from their implementation on accountability in the public entities</td>
<td>Performance monitoring technology in e-government does not always achieve accountability. Instead, it may result in a narrowing down of accountability. The introduction of e-government in performance monitoring technology increases the complexity in accountability.</td>
</tr>
<tr>
<td>Pina et al. (2010a)</td>
<td>EU countries</td>
<td>Website content analysis</td>
<td>Investigate the potential of e-government to enhance accountability by addressing financial accountability, transparency, interactivity, usability, and web maturity of government websites</td>
<td>IT has not a significant impact on accountability in practice. There are difficulties in achieving radical change in public administration systems through e-government.</td>
</tr>
<tr>
<td>Pina et al. (2010b)</td>
<td>EU countries</td>
<td>Website content analysis</td>
<td>Studied the influence of e-government on financial accountability and whether it is leading to convergence in financial accountability between EU countries, by investigating the organizational and contextual elements which explain the differences among EU countries</td>
<td>E-government is not yet operating as an effective tool to enhance financial accountability. Public administration style, information audited by private firm, and institutional pressures are critical elements to enhance financial accountability. Emphasized on the importance of traditional accountability mechanisms, and institutional pressures to reflect a good image of e-government performance in enhancing financial accountability.</td>
</tr>
<tr>
<td>Chen et al. (2010)</td>
<td>China</td>
<td>Document analysis</td>
<td>Investigated to what extent e-government enhances financial accountability in public organizations</td>
<td>Relationship between e-government and accountability is not clear. There is a need to further research about how e-government enhances accountability.</td>
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<td>Papenfuß and Schaefer (2010)</td>
<td>International</td>
<td>Website content analysis</td>
<td>Clarify the requirements change for information arising from the changing institutional arrangements for accountability of public administrations and investigate to what extent the reporting of accountability meets these requirements</td>
<td>Internet as a type of cooperation in public activities is still not available</td>
</tr>
<tr>
<td>Ray (2012)</td>
<td>India</td>
<td>Qualitative case study</td>
<td>Suggest a model for public services accountability by enhancing traditional accountability relationships among policy makers, provider of service, and the public through information and communication technology utilization</td>
<td>The study proposes some technical and business elements that strengthen the relationship between (decision-makers, service providers and residents)</td>
</tr>
<tr>
<td>Bertot et al. (2012)</td>
<td>USA</td>
<td>Literature review and content analysis</td>
<td>Investigate the ways, in which governments establish social media and e-government systems, to enhance collaboration with citizens to monitor government actions</td>
<td>E-government and social media have a capacity to promote transparency</td>
</tr>
<tr>
<td>Halachmi and Greiling (2013)</td>
<td>International</td>
<td>Case studies and survey literature</td>
<td>Investigate the benefits and issues facing e-government implementation in increasing transparency and accountability</td>
<td>There is a need to further research on how e-government enhances accountability</td>
</tr>
<tr>
<td>Haque and Pathrannarakul (2013)</td>
<td>Pakistan</td>
<td>Questionnaire</td>
<td>Addressed the influence of e-government in enhance accountability and transparency in the public entities</td>
<td>E-government has reasonable impact in enhancing the level of accountability and transparency in public entities</td>
</tr>
</tbody>
</table>
most prior research. Therefore, by taking these dimensions into consideration, this study contributes to knowledge by filling a gap identified in the prior literature.

In addition, numerous research studies (Bertot et al., 2010, 2012, Gandia and Archidona, 2008, Justice et al., 2006, Laswad et al., 2005, Pina et al., 2007, 2009, 2010a, Wong and Welch, 2004) have investigated the role of e-government in promoting accountability by focusing mainly on content analysis of government websites at the national level. However, these efforts are inadequate for assessing this issue in public organizations because government agencies tend to focus on presenting positive achievements rather than failures on their websites (Bhatnagar, 2003). Moreover, e-government does not merely consist of reports on websites because websites are only tools for reporting public information and providing online services. Establishing an effective tool, such as a website, for reporting or information dissemination is not the only way to demonstrate a public organization’s accountability. E-government involves implementation of IT systems that improve actions within government agencies, making them more transparent and accountable, enhancing overall performance and increasing interaction with other actors (Rodríguez Domínguez et al., 2011). Nevertheless, only a limited number of studies (e.g. Petrakaki et al., 2009; Ray, 2012) have investigated the level of implementation of e-government systems at the organizational level by using an in-depth empirical approach.

Furthermore, most of the previous literature has focused on developed countries (Bertot et al., 2010, 2012, Gandia and Archidona, 2008; Justice et al., 2006; Laswad et al., 2005; Pina et al., 2007, 2009, 2010a, Wong and Welch, 2004); only a few studies have focused on developing countries (Haque and Pathrannarakul, 2013). While the expected benefits of e-government, including accountability, are the same for developing and developed countries (Ndou, 2004), the elements that determine the success of e-government projects differ between developing and developed nations (Heeks, 2006). Moreover, there is variation between developed and developing countries in terms of the purpose and the effectiveness of accountability mechanisms, of culture and of type of governance (Sarker, 2009; Strøm et al., 2006). Pina et al. (2010a) claim that the degree to which e-government enhances accountability depends on the type of governance in each country, which may require different implementations, strategies and processes in developed countries than in developing countries. However, the implementation of e-government to enhance accountability and the elements that contribute to its success in the context of developing countries are issues that are still poorly understood, which indicates that there is a great need for further research. Such considerations motivated the researcher to conduct this study in the context of developing countries, specifically, in Jordan. Therefore, this study aims to provide a comprehensive understanding on how e-government mitigates the disorders and Dysfunctions of accountability relationships by using a case of Jordan Customs.

3. Methodology

This study adopts a qualitative case study approach (Walsham, 1995) of Jordan Customs. Considering the aim of this paper and the nature of the research questions in investigating what are the elements of e-government that mitigate the disorders of accountability relationships and how these elements enhance accountability, the qualitative approach is the most appropriate for answering such research questions (Creswell, 2012; Merriam, 2015). Qualitative approach enables to capture the perceptions of participants and to understand their personal experiences and opinions regarding the e-government implementation to promote accountability. Consequently, qualitative approach will give the chance to start with the subtleties of participants’ experiences and then proceed to develop a universal and
complete understanding of the phenomenon under study (Daymon and Holloway, 2011). Moreover, many studies (Chen et al., 2010; Griffin and Halpin, 2005; Petrakaki et al., 2009) have pointed out that enhancing accountability through e-government and its success elements is still unclear and unexplored phenomenon, specifically in developing countries. It involves many complex processes and is related to various elements such as organizational, technological and environmental aspects. Thus, it is important to gain further understanding of the processes in organizations from individuals’ perspective. Therefore, the value of qualitative case study method for this research is that it has a potential to handle such unexplained and complex phenomenon. This is in line with a study by Walsham (2006), who argued that the qualitative case study technique is an apt method that enables the analysis of the nuances and difficulties of complicated social scenarios to grasp the meaning of the phenomenon in its natural surroundings. The following sections discuss the background of research case study, data collection and data analysis.

3.1 Jordan Customs case
An organization such as Customs Department has a large interface with a range of different stakeholders, including government authorities, traders, brokers, citizens, international bodies and others (JCD, 2012b). Those stakeholders are diverse, and each of them has different interests, demands and needs from Customs that most likely are conflicting with each other. Besides, the Customs Department implements many laws and regulations of both Customs and other government entities’ legislations that are required to the Customs transactions completion. Therefore, the heterogeneous nature of stakeholders and their conflicting needs and demands increase the burden of Customs to be accountable simultaneously to all of those stakeholders in terms of alignment between meeting their conflicting demands and needs, concomitantly, and commitment with legal and regulatory requirements. The director-general of Jordan Customs in one of speeches stated that:

An agency of the caliber of Jordan Customs has many different stakeholders and its work relate to 60-70 of governmental and nongovernmental parties. In fact, the presence of Jordan Customs stands between those parties and citizens increases the burden on our shoulders. At the same time, we must not dismiss the laws and regulations requirements of other governmental agencies otherwise we will receive much of the blaming and be subjected to accountability. It is a hard equation to maintain in terms of balancing our obligations to the other governmental agencies with the demands of the clients (JCD, 2012b).

As an illustration, the security threats that face Jordan have been grown in the past decade as a result of deteriorating security situations in the neighboring countries, where there is drug production and terrorist groups, resulting in emergence of a new types and methods of smuggling and hazards. This consequently make the Customs accountable to citizens for responsiveness to their needs in terms of protection of society from hazards and illegal goods. On the other hand, the volume of trade across borders has been increased steadily in recent years, accompanied by the need to commitment with the requirements of donors and international agreements that focus on transforming the traditional role of Customs administrations globally from revenue collection to reducing administrative barriers and unnecessary delays so as to facilitate cross-border trade. As a result, the Customs Department is accountable to Jordanian Government commands for increasing Customs revenue, promoting investment, commitment with the requirements of international bodies and enhancing the competitive edge and Jordan’s ranking in international reports to support national economy. Therefore, the alignment between these demands is a very difficult task in terms of responding to the needs of citizens in protection of national security from hazards and ensure safety for Jordanian people while, at same time, being committed to
government orders to increase revenues and facilitate cross-border trade. These diverse demands increased burden on the Customs Department to be accountable in more than one sense so as to meet concurrently conflicting expectations and demands of a complex environment. This point was repeatedly discussed by many Customs officers; for example, the director of risk management in one of meetings said:

[...] to facilitate for the compliant traders and control incompliant under severe circumstances that are surrounding the country puts us facing huge security, political and economical challenges. The country is threatened and every day we see seizures of weapons and drugs, a fact that puts us facing the equation of balancing facilitation and compliance which in turn makes us more subject to accountability in front of the government and the society (JCD, 2014).

Similarly, the director of telecommunications and electronic control said:

Usually if we wanted to provide more facilitations to the transit movement and to the traders this would be on the account of security measures and control of cross border goods, and if we increase control that would hurdle the movement of goods! In fact it was difficult to balance these goals simultaneously (JCD, 2014).

Therefore, Jordan Customs case contributes and gives further insight on how to address the confusion, fuzziness and dysfunctions in accountability relationships by providing several success elements that contribute to mitigate the problem of disorder between accountability relationships in public organizations.

Early 1997, Jordan Customs adopted the modernization and reform approach for its processes by seeking continuous re-formulation of its strategies, modernization of operations and amendment of legislation (Younis, 2004). Through this new approach, Jordan Customs has changed its work and actions from traditional concept of customs, which is based on tax collection and arduous regulatory requirements, into a new concept that aims to enhance accountability in its actions by transforming toward the customer-centric approach and contributing to support the national economy and openness to the regional and global markets (JCD, 2011b; UNECE, 2012; Younis, 2004). To do so, all aspects have been addressed, including setting the plans and re-formulating the strategies, amending legislation and modernizing the operations by using the latest technologies and benefitting from the newest information and communication technology applications, which automate the whole Customs processes (Younis, 2004). As a result, many international organizations have recognized that the Jordanian Customs has made major breakthrough in enhancing accountability by developing and implementing e-government system. They have recommended to adopt Jordan Customs experience as a good example to strengthen accountability. In addition, Jordan Customs has been ranked by the Jordanian National e-government program as a featured institution in providing e-services in Jordan. It also certificated by UNCTAD as the best developer in e-government systems.

3.2 Data collection and analysis
Data were collected in this research by using a triangulation approach that included semi-structured interviews as a main data collection method, document reviews and observation. As suggested by Aman and Kasimini (2011), Heeks and Bailur (2007), the data triangulation method could develop a detailed rich data on e-government research. The data triangulation approach also improves the validity of case study research and maintains the improvement of converging lines of inquiry (Walsham, 1995).

Interviews involved 19 individuals that lasted 34 h from Jordan Customs and other governmental and non-governmental entities. Table III shows details of interviews. Internal category of interviewees comprises three managerial levels: senior, middle and operational
of officers in Jordan customs, including IT and business officers. External interviewees include people from the public and private sector who are users of e-government systems and have experience in Customs work. This is in line with Heeks (2002), who emphasized that the research investigating the implementation of e-government projects should take into consideration the perspectives of different organizational levels to capture the phenomenon from different perspectives. Moreover, the selection of a variety of participants in interviews ensures more credibility of viewpoints and validation of e-government research (Yildiz, 2007). The interviewees were questioned on their experience and understanding of e-government implementation, process, procedures, and the key success elements and barriers to e-government implementation in enhancing accountability in Jordan Customs. All interviews were taped on a recorder device and then transcribed. Researchers carried out coding of transcripts and rechecked repeatedly for final coding.

Data analysis includes identification of elements, issues, and development of themes from the transcripts, documents, and notes. Documents that were collected involve annual reports, strategic plans, Customs Journal, reports, publications, instructions, notifications, circulars, regulations, laws, daily press reports, meeting minutes, results of surveys, guides of work, international reports, and many others. In addition, observations in Jordan Customs cover the work processes through e-government implementation and how it handles customs transaction and screenshots of systems. Researchers later review literatures to explain the themes. Hence, the findings of this study are not a priori. The researchers make sense of the data and explain the findings accordingly.

4. Findings and discussions
This section presents findings of the empirical study in Jordan Customs. This includes analysis and discussions with respect to the elements of e-government that mitigate the

<table>
<thead>
<tr>
<th>Position of interviewee</th>
<th>Level</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Telecommunications and Electronic Control Director</td>
<td>Internal/Senior</td>
<td>1:15</td>
</tr>
<tr>
<td>Information Technology Director (CIO)</td>
<td>Internal/Senior</td>
<td>2:30</td>
</tr>
<tr>
<td>Director-General</td>
<td>Internal/Senior</td>
<td>2:00</td>
</tr>
<tr>
<td>Head of Single Window Program</td>
<td>Internal/Senior</td>
<td>2:00</td>
</tr>
<tr>
<td>Internal Control &amp; Inspection Director</td>
<td>Internal/Senior</td>
<td>1:15</td>
</tr>
<tr>
<td>Quality Management Director</td>
<td>Internal/Senior</td>
<td>1:45</td>
</tr>
<tr>
<td>Head of ASYCUDA World Division</td>
<td>Internal/Middle</td>
<td>1:45</td>
</tr>
<tr>
<td>Head of Customs Intelligence Division</td>
<td>Internal/Middle</td>
<td>1:15</td>
</tr>
<tr>
<td>Expert Customs Measures and Business analyst</td>
<td>Internal/Middle</td>
<td>2:00</td>
</tr>
<tr>
<td>Head of Post-audit Division</td>
<td>Internal/Middle</td>
<td>1:00</td>
</tr>
<tr>
<td>Strategies and Institutional Development officer</td>
<td>Internal/Operational</td>
<td>2:15</td>
</tr>
<tr>
<td>E-government Division officer in Jordan Customs</td>
<td>Internal/Operational</td>
<td>2:20</td>
</tr>
<tr>
<td>Systems Analyst in ASYCUDA World Division</td>
<td>Internal/Operational</td>
<td>2:45</td>
</tr>
<tr>
<td>Post-audit officer</td>
<td>Internal/Operational</td>
<td>2:00</td>
</tr>
<tr>
<td>Risk Analyst</td>
<td>Internal/Operational</td>
<td>1:00</td>
</tr>
<tr>
<td>Staff Member in the Audit Bureau</td>
<td>External/Government entity</td>
<td>1:00</td>
</tr>
<tr>
<td>IT ASYCUDA Expert from United Nations Conference on Trade and Development (UNCTAD)</td>
<td>External/International organization</td>
<td>3:15</td>
</tr>
<tr>
<td>Head of Syndicate of Clearance Companies and Transport of Goods</td>
<td>External/Private sector</td>
<td>2:00</td>
</tr>
<tr>
<td>Member of Jordan Chamber of Commerce</td>
<td>External/Private sector</td>
<td>0:45</td>
</tr>
</tbody>
</table>

Table III.
List of interviews

TOTAL 34
disorder between accountability dimensions and actions taken by Jordan Customs to overcome issues. The classification of these elements draws on information systems as social systems model proposed by Heeks (1998b), who suggested that the impact of e-government on accountability is determined mainly by three contexts: technological, organizational and environmental dimensions.

4.1 Technology elements

4.1.1 Systems integration. The Jordan Customs has automated all of its operations by using a variety of systems to enhance accountability in Customs operations. However, participants pointed out that having a large number of these systems which were operated separately in each customs center did not achieve the desired goal of Customs in enhancing accountability. This is due to the variation in software, databases, servers and ad hoc networks, that led to information silo. From the interviewees’ viewpoints, such isolation among databases and the way in which data were being managed in each system separately have hindered the process of providing a comprehensive information to stakeholders to follow up the whole treatment process of transactions or to evaluate the actual decisions and actions in the back-offices of customs centers. Consequently, since 2006, Jordan Customs was striving to take further steps to develop its IT infrastructure by integrating the subsystems that were operated separately to be integrated with “ASYCUDA World” system. This development of integrating the subsystems within one system “ASYCUDA” has been perceived by many interviewees as one of the success elements to enhance accountability in customs actions and meet the expectations of different stakeholders. As IT director said:

This success in implementation is because we developed the system and not putting it into force as it is; we completely applied the ASYCUDA but we integrated several new systems into it to enhance customs accountability in front of all stakeholders, these projects that were developed in the past six years took us to a stage where we can meet all the demands and obligations.

The findings show that systems integration enables the Jordan Customs to be concomitantly accountable to the demands of different stakeholders, as well as eliminates the conflict between satisfying the government orders in terms of facilitating the trade movement “controllability” and meeting the needs of citizens in protecting the Jordanian society from illegal trade “responsiveness”. The director of telecommunications and electronic control said:

This integration among systems balanced as well as removed contradiction between facilitation and control of transit movement such increased significantly customs ability to meet its obligations for the government and the society.

This finding is analogous to that stated by Layne and Lee (2001), who asserted that systems integration improves the capacity of public organizations to meet their obligations to the senior government authorities. The findings of this study provide further illustrations to this point that the systems integration enhances the responsiveness to the needs of citizens in protecting the society from illegal trade.

4.1.2 Single window approach. As a matter of fact, the service provided by Customs administrations does not start and end within one authority, rather it requires series of regulatory requirements, complicated actions, verification and inspection from several concerned authorities. Worse yet, the vast majority of these measures are performed by other authorities instead of customs. This issue is highlighted by the Simplification of International Trade Procedures Board that “…it is widely believed that non-Customs checks now make up between 70 and 80 per cent of all official checks on imports that take
place within the port environment” (Linington, 2005, p. 16). Consequently, these complicated measures make the processing of Customs transactions more arduous, needing wait time and lacking transparency and accountability in actions. This is because the procedures are insulated and completely differ from one another in each authority and the geographic distances are spaced among government entities, which cause a delay in transactions processing, and thus, it is difficult to determine who is accountable for delay or wrongdoings that were occurring. As a result, the dereliction of one authority performance may negatively influence on the performance of Jordan Customs Department, even if the Customs do the best in its own measures in transaction processing. This is because all authorities including Customs are interdependent with each other, which consequently the Jordan Customs could be held accountable and blaming for wrongdoings caused by others authorities.

As a result of this issue, in 2008, Jordan Customs launched a single window program with the purpose of re-inventing the way in which customs operates toward customer-centric approach and makes all stages of transactions processing more transparent and accountable. Jordan Customs has implemented a single window using ASYCUDA World system as an integrated single system to complete all measures from all concerned authorities, and all operations are performed through one platform. This approach allows the customers to access integrated services provided by several entities whether Customs or other authorities via single entry point, regardless the geographic spread of these authorities.

The findings indicate that single window enhances the transparency of Customs transactions processing by providing the opportunity for different stakeholders to access more comprehensive information in a timely manner to find out the regulatory requirements for transactions, trace the transactions in each stage of processing at all authorities, identify the time required to complete the transactions, reveal the actions and decisions taken by each authority involved in customs transaction’s treatment and determine the responsibilities for delays or bad performance. The following quotes support this point:

I can say that the single window has achieved clarity and transparency in all stages of the customs clearance process, because all the procedures have become within a single system and the clients can watch each and every action that has been carried out during process.

We can now trace the clearance process and diagnose the bottleneck at any stage, we know what the agencies are concerned with on the measures that are taken on the customs declaration.

This finding is in line with that stated by Aman et al. (2017), who affirmed that single window approach promotes transparency in all stages of transaction processing.

Moreover, numerous interviewees stressed that the single window approach contributed to enhance the ability of Jordan Customs to align between the commitment with legal and regulatory requirements of customs transaction “responsibility” while meeting the government’s orders with respect to reducing the time release, simplifying the procedures, enhancing the competitive edge and improving the rank of Jordan in international reports and satisfying its commitments with signed agreements and the requirements of international donors “controllability”. For instance, one participant stated:

[...] the implementation of the single window is the best solution for achieving balance between the legal requirements of the agencies that involved in customs transactions processing, and also meet the demands of the government in terms of contributing in enhancing national economy and further improving Jordan’s rank in the international reports, as well as helping the government meet its international obligations.
4.1.3 Electronic connectivity projects. The terms “electronic connectivity” (e-connectivity) refers to the collaborative electronic information exchange between various entities (Aman et al., 2017). Jordan Customs has established a wide network of e-connectivity projects with 29 government and non-governmental entities, including neighboring countries. The findings of this study revealed that e-connectivity is one of the success elements in enhancing accountability in Jordan Customs. It promotes transparency in Customs actions through integration among both of customs and other agencies’ databases, which in turn increases accessibility to timely information needed for government agencies and business. The director of telecommunications and electronic control stated:

Honestly, electronic connectivity is one requirement for the success of transparency and accountability in Jordan Customs.

In addition, e-connectivity projects enable the customs to satisfy the demands of different stakeholders from public and private sectors. Many participants perceived e-connectivity with neighboring countries as a key element for success of Customs Department to harmonize simultaneously between satisfying the orders of government in facilitating trade movement “controllability” and meeting the needs of citizens in protecting the society from smuggling “responsiveness”. According to the head of post-audit division:

In my opinion, the greatest benefit of the international e-connection is that it contributed in protecting the society form smuggling and at the same time facilitated the movement of goods across the borders as the data is sent to us even before the arrival of the goods in Jordan. This allows us to target the goods that need inspection, and facilitate the passage of trucks before the arrival of goods.

This consistent with Gil-Garcia et al. (2007a), who indicated that the e-connectivity projects strengthen the capacity of public organizations in achieving national interests and meeting the government demands. However, the findings of this study added further interpretation that the e-connectivity enables the Customs Department to carry out pre-arrival processing (PAP) concept, which completes all administrative requirements needed for Customs transactions processing upfront before the consignments reach the port of arrival in Jordan. Several participants perceived the PAP as a success element that has the potential to strengthen the capacity of Jordan Customs to satisfy the government’s desire in cutting down the processing time, eliminating administrative barriers, enhancing Jordan’s rank in international reports, promoting investment and supporting national economy.

4.2 Environmental elements
4.2.1 Public participation. Public participation refers to the engagement of citizens and business in decision-making processes. The findings show that Jordan Customs is seeking to engage the key actors from citizens and business bodies in the decision-making processes by developing a variety of communication channels such as periodic meetings, seminars and forums, surveys and field visits by senior managers. This participatory approach is perceived by many interviewees as a kind of promoting transparency in Customs actions by revealing the fact of customs achievements to the citizens, justifying the alleged wrongdoings and disclosing the future projects and plans. The director of telecommunications and electronic control commented on this point:

Such meetings have created further transparency between us and citizens because we talk to them openly about our achievements, explain to them some confusing issues that they may have understood in the wrong way and inform them what are our future projects and plans.
This finding concurs with that reported by Lee and Kwak (2012), Kim (2014) and Saxton and Guo (2011), who emphasize that public participation by engaging the citizens in decision-making processes is an effective tool to enhance transparency by increasing openness and interaction between public organization and citizens, which makes public organizations more transparent.

The findings also revealed that the public participation approach enhances the capabilities of Jordan Customs to mitigate the disorders and dysfunctions between three accountability relationships: controllability, responsibility and responsiveness. Public participation enables Customs to balance concurrently between meeting the government orders, following the rules and responding to the preferences of clients. To add further interpretation, Jordan Customs used to conduct surveys of citizens and clients about legislative amendments of the Customs Act. In one survey conducted by Jordan Customs about the satisfaction of stakeholders with implementation of electronic transit monitoring and facilitation (ETMF) system, the Customs requested the opinions of stakeholders including clients if they prefer using EMTF system by paying fees or retaining the former procedures of traditional Customs escort convoys. The results of survey indicated that nearly 92 per cent of stakeholders were satisfied with EMTF service by paying fees. Accordingly, Jordan Customs amended its Financial Regime (No. 9) to levy 20 Jordanian Dinars per truck by providing e-tracking services, which in turn contributed to support the treasury with revenue. This indicates that the Jordan Customs not only follows orders of government or restricted by regulations but also is more interested in the preferences of its clients and citizens. Thus, the public participation approach makes Jordan Customs to be accountable simultaneously to government orders in terms of increasing the revenue and meeting clients’ preferences.

This point supported by Koppell (2005), who affirmed that an accountable organization should not be absolutely constrained by the orders of principal, but should also be constrained by the desires of an organization’s clients. Therefore, taking into account the preferences of stakeholders and engaging them in decision-making processes of the financial affairs enhances the accountability of Customs to stakeholders for response to their preferences. This finding has also been discussed repeatedly in the existing literature (Bertot et al., 2012; Justice et al., 2006; Kim, 2014; Lee and Kwak, 2012; Saxton and Guo, 2011). These researchers emphasized that public participation is one of critical elements to increase responsiveness and ensure accountability in public organizations. For instance, Chun et al. (2010), Lee and Kwak (2012) noted that the engagement of public in e-government projects promotes responsiveness and accountability of public organizations by increasing the opportunities for determining the public needs and makes the government more responsive toward their preferences.

Moreover, the findings from the interviews show that public participation contributes to providing a sound base to design and develop e-government systems to be consistent with the demands and preferences of clients, which consequently supports the success of e-government implementation toward meeting their real needs and aspirations. According to Heeks (2003), the success of e-government initiatives in developing countries relies on bridging the gap between the reality and the design of the e-government systems. This indicates that the success of e-government implementation to enhance responsiveness not only requires technological aspects, but also requires stakeholders’ participation which would assist to bridge the gap between the design and reality for e-government systems. This in turn improves the responsiveness to the demands and expectations of stakeholders, provides creative opportunities to introduce further improvements for e-government implementation, and helps in acceptance of e-government transformation. This is consistent with an IT expert from UNCTAD, when he said:
There are a number of procedures we developed but were not very effective so we improved them because clients encouraged us to implement the system and provided us with notices and suggestions and did not object the implementation but on the contrary were interested in the success of the implementation. I believe this involvement by brokers and traders created creative opportunities for development and enhanced a greater responsiveness to realistic demands which is the actual success of the system and its effectiveness and achieving its ends.

4.2.2 Partnership council. Another interesting success element noted as being valuable in enhancing accountability in Customs Department is partnership council. Jordan Customs has established Partnership Council with the representatives of all private sector with the purpose of discussing common issues, promoting collaboration and improving public–private partnership. The findings revealed that the reason for establishing the Partnership Council is that the Customs Department deals with a variety of stakeholders from the private sector that have different interests, demands and needs, which most likely conflict with each other. Therefore, it is difficult to the Customs to respond concomitantly to all of these needs and demands because meeting the needs of a particular party could be detrimental to the interests of others as a result of heterogeneous nature of stakeholders and their conflicting interests.

The findings of this study indicated that the Partnership Council mitigates the conflicts between the demands and needs of different stakeholders as they are engaged in decision-making processes about the issues related to their demands and preferences by voting of all members on the decisions that affect their interests, instead of the decisions taken individually by the director-general. Such resolutions, therefore, achieve public interest and represent the true desire of the majority of stakeholders. The secretary of Partnership Council noted:

Voting by the Council members is the determinant here and this lightened the burden for customs in responding to the needs of the clients and cuts down the complaints of the clients as the decision is now in their hands and reflect the opinion of the majority and achieve a public interest and is not an individual decision by the director-general.

Therefore, the Partnership Council contributes to eliminate the conflict between “controllability”, “responsibility” and “responsiveness” by transforming the Customs actions toward customer-centric approach. The Partnership Council reduces the discretionary and authoritarian resolutions taken by Customs officials and transforms the concentration of power among the customs administrators from hierarchical control in satisfying their superiors’ orders (controllability) or act based on strict rules of (responsibility) and replace it with the commitment to meet the preferences and demands of the representatives of all stakeholders (responsiveness). Head of the syndicate of clearance companies and transport of goods, who is one of Council members, said:

In the past, and in some cases we were surprised to know that there were instructions issued a year or more ago but we know nothing about those! And if we discussed an issue with the director of a customs he would apologize saying it is the instructions of the director-general! But now we can object and effect an amendment and now before the issuance of the proclamation we convene and discuss the idea of the proclamation and put it to voting by all members if it goes in line with the general interests and cause no harm to anybody.

4.3 Organizational elements
4.3.1 Risk management approach. In 2007, Jordan Customs transformed the way in which customs transactions are processed toward the risk management approach, which based on efficient use of resources, and direct them to target the cargo that are most likely to have a
high level of risk, while simplifying the procedures for the safe consignments using automated risk management system. The findings from interviews show that the automation of risk management process enhances the ability of Jordan Customs to meet simultaneously the conflicting demands of different stakeholders through increasing the efficiency of utilizing available resources to target the hazardous cargo and facilitates the trade movement. This in turn contributes to align between enhancing the “responsiveness” and “controllability”, as the risk management approach meets the needs of citizens in improving the control over the illegal trade and protecting the national security; in contrast, it satisfies the government’s orders regarding facilitating the trade movements and increasing the revenue. Head of ASYCUDA division supported this point, when she said:

Risk management contributed towards achieving balance in meeting the government requirements and protection of society so the compliant trader gets advantages in terms of time release so at the end we facilitate, controlled and also collected revenues.

The IT director also clarified:

In this operation we achieved two goals simultaneously, we gave facilitations, reduced time release and at the same time protect the people from smugglings by targeting the high-risk consignments.

4.3.2 Having well-defined strategic plan. It is interesting to find that some of accountability dimensions such as transparency and responsiveness have been clearly well-defined as a forward-looking goals in the strategic plans of Jordan Customs. For instance, the Customs strategic plans include the following goals “Strengthen the administration to be transparent and accountable” (JCD, 2011b, pp. 12-13, JCD, 2014). It also attempts to “increase the satisfaction of partners and service recipients by 2 per cent annually” (JCD, 2011b, pp. 12-13, JCD, 2014). The findings revealed that the e-government projects in Jordan Customs are designed and developed to be consistent with the planned goals such as enhancing accountability dimensions such as transparency and responsiveness to the demands and needs of clients and increase their satisfaction. A business analyst, who is an expert in Customs measures, noted:

We would find a number of IT projects that were designed to serve the strategic goals in terms of achieving transparency and accountability.

Similarly, business analyst, who is an expert in Customs measures, noted:

Many e-government projects and e-services were on purpose developed to improve responding to clients and increase their satisfaction.

This indicates that the perceived benefits from e-government implementation such as enhancing transparency and responsiveness are intentional and part of e-government systems design and its objectives. Therefore, this enables the extraction of maximum benefit from e-government systems successfully in achieving greater accountability. As the customer care director said:

Electronic systems helped significantly in achieving the strategic goals of the Customs in terms of promoting transparency and accountability and increasing clients’ satisfaction because these systems were basically designed based on the strategic objectives of the Customs.

Additionally, the findings show that Jordan Customs has adopted the participatory approach in preparing its strategic plans by engaging all stakeholders such as representatives of private sector, clients, partners from government agencies, donors, and customs officers.
Moreover, the documents related to Jordan Customs revealed that the Customs adopted the participatory approach in preparing its strategic plans by engaging all stakeholders including employees from all administrative levels, and externally such as service recipients, representatives of private sector of those who are partnership Council members, government agencies and donors. Numerous interviewees affirmed that this participatory approach in strategic planning promotes significantly the transparency in customs work by disclosing what the Customs intends to do, revealing its goals, projects and achievements and justifying the non-achieved goals for all stakeholders. The director-general of customs department commented on this point:

Our approach in preparing strategies and plans depends on field work and consultation with all partners and transparently declaring our plans and projects and what has been achieved and what has not been achieved.

The results of this study revealed that the participatory approach in strategic planning could serve as an implicit contract of accountability between Jordan Customs and stakeholders. Thus, the Customs can be held liable for achieving the goals that have been agreed and set forth by all stakeholders and consequently face either punishments or rewards accordingly. The findings from observations, documents and interviews revealed that there are a variety of consequences that could face the Customs from the stakeholders as a result of its achievements from the planning; this depends on the power level of authority for stakeholders. For instance, the Customs could face budget cuts or spending increases from the Ministry of Finance as the Customs implement results-oriented budgeting to fund its projects; thus, its allocated budget resources depend mainly on the level of its achievements in plans. In addition, the Customs could be held liable for poor achievements in its strategic plan by facing interrogation from supreme audit bodies. Furthermore, the Customs presents the achievements of strategic plan for the members of partnership Council who are representatives of private sector and justifies to them the mis-achievements which could face questioning and resentment. Besides that, the researchers noticed that the results of strategic plan assessment of Jordan Customs are published in the media, which enable the citizens to find out the Customs achievements. On the other hand, the findings of this study indicated that the strategic planning enhances the accountability of senior managers who could be held liable by facing interrogation from top management as a result of their poor achievements of the planned goals. This in turn forced the Customs managers to commitment with achieving the planned goals.

Moreover, several interviewees asserted that the participatory approach in strategic planning is one of the key success elements of e-government to promote responsiveness. They argued that this approach contributes in mitigating the disorders and dysfunctions of accountability relationships by understanding the actual demands and needs of different stakeholders. Consequently, the demands and needs of stakeholders are aligned with Customs goals, and thus the e-government systems are being designed and developed to meet these demands and needs. An officer working at strategic planning directorate said:

This approach results in deep understanding of the demands of the partners and stakeholders and more response for as many as possible of their demands and aspirations and achieving balance between their demands and our goals.

Another participant working in IT directorate commented and noted that the participatory approach contributed toward greater responding, better planning and achieving more realistic goals from e-government systems, when he commented:
[...] the performance indicators related to the projects in IT directorate were all achieved at high percentage because we put the strategic goals through studies with clients and government agencies that deal with customs so we feel through these surveys the real needs so our building of the projects becomes more realistic in meeting their demands.

The statistics drawn from the results of strategic plans assessment in Customs Department support this point and showed that the Customs Department achieved high percentages of achievements in its strategic plans (Figure 2). This obviously indicates that the participatory approach in strategic planning assists in formulating more realistic and achievable goals.

Table IV summarizes the analysis and discussions of the findings based on conceptual dimensions suggested by Heeks (1998b), which are technological, organizational and environmental dimensions. The table shows also how these elements enhance accountability and mitigate the disorders of accountability relationships compared with prior studies.

5. Conclusion
The implementation of e-government to enhance accountability is still an unclear matter (Pina et al., 2007; Wong and Welch, 2004) and involves many complex processes (Chen et al., 2010; Petrakaki et al., 2009). It still remains rife with problems in many nations (Griffin and Halpin, 2005), particularly in the developing countries (Haque and Pathrannarakul, 2013). Our understanding of the successful implementation of e-government to promote accountability is largely based upon understanding the success elements of e-government that contribute to mitigate the disorders and dysfunctions of accountability relationships (Heeks, 1998b; Pina et al., 2010a; Wong and Welch, 2004). This study proposes to understand how e-government mitigates the disorders and dysfunctions of accountability relationships by using a case of Jordan Customs. This empirical study focused on understanding three contexts, namely, technological, environmental and organizational aspects. The technological elements include systems integration, single window and e-connectivity. The environmental elements embrace public participation and partnership council. The organizational elements comprise having well-defined strategic plan and risk management approach.

5.1 Implications
The fact of e-government as an instrument to enhance accountability still lacks its own conceptual foundations (Halachmi and Greiling, 2013; Lourenco et al., 2017). The main contribution of this study is enhance the understanding in theory by extending the accountability dimensions suggested by (Koppell, 2005) with the key success elements of e-government that promote accountability that suggested by (Heeks, 1998b) and other current literatures. The e-government literature (Chen et al., 2010; Orelli et al., 2010;
<table>
<thead>
<tr>
<th>Context</th>
<th>Success elements</th>
<th>How to mitigate the disorders of accountability relationships</th>
<th>Prior studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Systems integration</td>
<td>Enable the Jordan Customs to be concomitantly accountable to the demands of different stakeholders. Remove the conflicting between “Controllability” in satisfying the government orders and “Responsiveness” to meet the citizens’ needs.</td>
<td>Layne and Lee (2001)</td>
</tr>
<tr>
<td></td>
<td>Single window approach</td>
<td>Promotes transparency in transactions processing by:</td>
<td>Aman et al. (2017)</td>
</tr>
<tr>
<td></td>
<td>E-connectivity projects</td>
<td>Enhances transparency by improving accessibility to information needed for government agencies and business in timely manner. Enables to meet the demands of different stakeholders from both public and private sector. Contributes to harmonize simultaneously between “Controllability” in satisfying government’s orders and “Responsiveness” in meeting the needs of citizens. Enables to implement PAP concept, which strengthen the capacity of Customs to meet the government desire in achieving competitive and economic advantages.</td>
<td>Gil-Garcia et al. (2007a)</td>
</tr>
<tr>
<td>Environmental</td>
<td>Public participation</td>
<td>Improves transparency by increasing openness and interaction with the public. Mitigates the disorders and dysfunctions between controllability, responsibility and responsiveness by making Jordan Customs is not only follow orders of government or restricted by regulations, but also it is more interested in the preferences of its clients and citizens. Provides a sound base to design and develop e-government systems to be consistent with the demands and preferences of clients which consequently support the success of e-government implementation towards enhancing responsiveness to the real needs and aspirations of clients.</td>
<td>Lee and Kwak (2012), Kim (2014), Saxton and Guo (2011), Koppell (2005), and Heeks (2003)</td>
</tr>
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(continued)
Partnership council
Mitigates the conflicts between the demands and needs of different stakeholders
Reduces the conflict between “Controllability”, “Responsibility” and “Responsiveness” by eliminating the discretionary and authoritarian resolutions taken by officials, and transforming the concentration of power from hierarchical control in satisfying the superiors’ orders “Controllability” or they act based on strict rules “Responsibility”, and replace it with the commitment to meet the preferences and demands of the representatives of all stakeholders “Responsiveness”

Organizational Risk management approach
Contributes to align between “Responsiveness” and “Controllability” by meeting simultaneously the needs of citizens in improving the control over the illegal trade and protecting the national security, and satisfying the government’s orders regarding to facilitate the trade movements and increase revenue

Having well-defined strategic plan
Accountability dimensions such as transparency and responsiveness have been clearly defined and well-formulated in the strategic plans of Jordan Customs as a forward-looking goal seeks to achieve. This indicates that the perceived benefits from e-government implementation such as enhancing transparency and responsiveness are intentional and part of e-government systems design and its objectives. Therefore, this enables the extraction of maximum benefit from e-government systems successfully in achieving greater accountability

The participatory approach in strategic planning promotes transparency by disclosing what public organizations intend to do, revealing its goals, projects, achievements, as well as justifying the non-achieved goals for all stakeholders

The participatory approach in strategic planning is serve as an implicit contract of accountability between public organizations and stakeholders. Thus, the public organizations be held liable for achieving the goals that have been agreed and set forth by all stakeholders, and consequently facing either punishments or rewards accordingly

Table IV.

<table>
<thead>
<tr>
<th>Context</th>
<th>Success elements</th>
<th>How to mitigate the disorders of accountability relationships</th>
<th>Prior studies</th>
</tr>
</thead>
</table>
| Partnership council      | Mitigates the conflicts between the demands and needs of different stakeholders
|                          | Reduces the conflict between “Controllability”, “Responsibility” and “Responsiveness” by eliminating the discretionary and authoritarian resolutions taken by officials, and transforming the concentration of power from hierarchical control in satisfying the superiors’ orders “Controllability” or they act based on strict rules “Responsibility”, and replace it with the commitment to meet the preferences and demands of the representatives of all stakeholders “Responsiveness” | | |
| Organizational Risk      | Contributes to align between “Responsiveness” and “Controllability” by meeting simultaneously the needs of citizens in improving the control over the illegal trade and protecting the national security, and satisfying the government’s orders regarding to facilitate the trade movements and increase revenue | | |
| management approach      | Having well-defined strategic plan | Accountability dimensions such as transparency and responsiveness have been clearly defined and well-formulated in the strategic plans of Jordan Customs as a forward-looking goal seeks to achieve. This indicates that the perceived benefits from e-government implementation such as enhancing transparency and responsiveness are intentional and part of e-government systems design and its objectives. Therefore, this enables the extraction of maximum benefit from e-government systems successfully in achieving greater accountability | | |
|                          | The participatory approach in strategic planning promotes transparency by disclosing what public organizations intend to do, revealing its goals, projects, achievements, as well as justifying the non-achieved goals for all stakeholders | | |
|                          | The participatory approach in strategic planning is serve as an implicit contract of accountability between public organizations and stakeholders. Thus, the public organizations be held liable for achieving the goals that have been agreed and set forth by all stakeholders, and consequently facing either punishments or rewards accordingly | | |

(continued)
The participatory approach in strategic planning mitigates the disorders and dysfunctions of accountability relationships by understanding the actual demands and needs of different stakeholders. Consequently, these demands and needs are being aligned with the public organization goals, which in turn allows to design and develop e-government systems to be consistent with these demands and needs, as well as achieving more realistic goals from e-government systems.
Halachmi, 2011) indicates that there is not enough empirical evidence to show how e-government enhances accountability in public organizations. This paper enriches literature on e-government implementation to enhance accountability in public organizations (Bertot et al., 2012; Chen et al., 2010; Gil-Garcia and Martinez-Moyano, 2007b; Kim, 2014; Lee and Kwak, 2012; Pina et al., 2010a; Ray, 2012; Saxton and Guo, 2011).

Specifically, this study confirms to the earlier studies (Amin and Ahmed, 2012; Layne and Lee, 2001) that the systems integration is among key elements of e-government that promote accountability in public organizations. Another important element is e-connectivity projects, which contribute toward a greater accountability in the organizations’ actions by enabling the stakeholders to access more integrated and holistic information about government performance (Casalino et al., 2013; Kim et al., 2009; Pardo et al., 2010). The e-connectivity projects also strengthen the capacity of public organizations in achieving national interests and meeting the government demands (Gil-Garcia et al., 2007a). In addition, the public participation is one of critical elements to ensure accountability in public organizations (Bataineh and Abu-Shanab, 2016; Chun et al., 2012, 2010; Sandoval-Almazan and Gil-Garcia, 2012). This study enriches the body of literature by providing some new success elements of e-government that enhance accountability in public organizations such as single window, partnership council, risk management approach and having well-defined strategic plan. However, this paper contributes to the expansion of the boundaries of knowledge by adding further interpretation on how these elements reduce the existing confusions and dysfunctions in accountability relationships.

Moreover, this study contributes to the theory by providing a taxonomy of e-government success elements that enhance accountability. This taxonomy includes three categories, are: technology, environmental and organizational elements. Yet, very few studies (Heeks, 1998b; Ray, 2012) have provided taxonomy of e-government success elements that influence on accountability. However, These studies classified e-government elements into non-comprehensive categories, and these elements have a broad concept. The classification provided by this study offers a better contextual understanding of the key success elements for implementing e-government to enhance accountability by revealing the key areas that have an effectual influence.

Additionally, conducting this study within the developing country’s context (Jordan) is another contribution of this paper. Although the expected benefits of e-government implementation such as accountability are the same for developing and developed countries (Ndou, 2004), there is a variation between the developing and developed nations in terms of the purpose and the effectiveness of accountability mechanisms, culture and type of governance (Sarker, 2009; Strom et al., 2006). Having reviewed the literature, we found that the vast majority of previous studies have focused on addressing accountability in the developed countries whose governments are elected and are accountable to citizens directly. However, the studies on the effectiveness of e-government as a tool to enhance accountability in the context of developing countries have been overlooked by many researchers. Therefore, this study contributes to provide further understanding about how e-government enhances accountability within the context of developing countries.

For practitioners, this study provides guidelines for future e-government implementation strategy in public organizations. Enhancing accountability through e-government implementation has been identified as an aspirational goal in the strategy of national Jordanian e-government projects at all Jordanian Government institutions (MOICT, 2014). This requires future strategies to ensure proper implementation of e-government. This is essential particularly in the Jordan context as a developing country that struggles with a lack of resources and experiences to handle this new trend of e-government initiatives. The
findings of this study will assist Jordanian public organizations in reducing the existing confusions and dysfunctions in accountability relationships. Furthermore, the classification of accountability dimensions in this study helps the public organizations to meet simultaneously the conflicting demands of different stakeholders and be accountable to all of them. It also enables the public organizations to better use their resources by concentrating on those key areas that have a greater impact on enhancing accountability through e-government.

5.2 Key lessons
The empirical evidence of this study indicates that the e-government as a tool in itself does not achieve accountability. It assists in providing reporting about the public organizations’ performance but does not achieve full accountability. Therefore, public organizations need to focus on the organizational and environmental elements to mitigate the disorders and dysfunctions of accountability relationships and to ensure greater accountability through e-government implementation. This can be achieved by applying the following suggestions:

- The findings revealed that to extract the maximum benefits of e-government systems implementation in achieving greater accountability, the accountability dimensions must clearly be defined and well-formulated in the organization plans and then set intentionally as a part of objectives, design and development of e-government systems.

- This study also showed that the engagement of different stakeholders in the development and design of e-government systems contributes in the success of e-government implementation in enhancing accountability. This ensures that the e-government system is designed to be consistent with their real needs and demands and aligns between the conflicting demands of different stakeholders.

- Among the things that enabled the Customs to be successful in implementing e-government to enhance accountability is that the Customs adopted the open-source software, which refers to the source code of software available for Customs to conduct modification and enhancement in the e-government systems. This provides the opportunity for Customs to develop, design and adapt its e-government systems and align between the demands and needs of different stakeholders.

- The findings of this study indicate that the Customs Department has a very advanced IT infrastructure, more than other institutions at Jordan and regional level. This is evident in the findings that it has fully integrated systems which comprise all customs operations at diverse levels. Also, the Customs sought to establish collaborative e-government projects with other government institutions such as single window and e-connectivity, which resulted in a horizontal integration among databases of different agencies. By reviewing several e-government development stage models which evaluate the level of e-government development (Layne and Lee, 2001; Moon, 2002; Siau and Long, 2005), we found that the systems integration is considered as an advanced stage of e-government development and reflects the maturity level of e-government projects. Therefore, enhancing accountability through e-government system implementation can be achieved at an advanced level of IT infrastructure. We believe this is why the Customs is more successful in e-government implementation in enhancing accountability than other Jordanian institutions. This in line with the results reported by Siau and Long (2005) and Moon (2002), who argue that accountability through e-government implementation is achieved in advanced stages of e-government development.
5.3 Limitations and future work
This paper provides a basis for further thought on the e-government elements that mitigate the disorders and dysfunctions of accountability relationships in public organizations. This study adopted a single-case study approach using Jordan Customs, which might be considered a limitation to generalize the findings without conducting further research. Although the findings of this study could be beneficial for decision-makers in Jordanian Government to benefit from Jordan Customs’ experience, it would be useful to adopt these findings by future research to investigate empirically its validity in the context of other organizations in Jordan. In addition, the current study was conducted in Jordan, where the type of governance is representative democracy, where the government is appointed and accountable to the House of Representative. Therefore, it would be interesting to investigate the findings of this study in the context of other countries that have same type of governance.

Additionally, the scope of this paper is limited to the investigation of the key success elements of e-government implementation that enhance accountability at the organization level. The themes included in this study were classified into organizational, environmental and technological themes. However, it is essential to learn more about these elements at the national level, such as investigating the national e-government project in the entire government organizations. Therefore, further research could be conducted at the national level (at the whole, e-government’s national level) to extend the findings of this study by adding further themes that are consistent with the national level of e-government implementation, such as socio-cultural and economical elements. Moreover, further research should be conducted to extend the findings of this study, particularly in the organizational context, as a new success element that may emerge and could assist public organizations in improving their performance to enhance accountability in their operations.

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