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E-GOVERNMENT IMPLEMENTATION IN DEVELOPING COUNTRIES: A NEOINSTITUTIONAL APPROACH TO EXPLAIN FAILURE

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Abstract

This paper presents preliminary results of an ongoing study of e-government implementation in Lebanon. Following suggestions by various scholars that students of e-government employ theory to strengthen our knowledge about ICT for development, we apply a neoinstitutional theoretical lens to understand the role of international donor agencies that led the Lebanese public authorities, since 2000, to invest in e-services despite the country's serious economic difficulties and heavy debt. We situate the implementation of an e-government infrastructure in the context of external pressures that Lebanese public administrators confronted. This analysis is based on the triangulation of evidence from semi-structured interviews with senior officials in government agencies who led the implementation effort, official government documents, and newspaper reports on the progress of this project. We find that the response by Lebanese public officials can be explained by the three isomorphic processes of coercion, mimesis, and transmission of norms. This case study suggests that implementing e-administration by developing countries is not necessarily motivated by a search for efficiency; under certain conditions, adoption results from external institutional pressures. Nonetheless, this implementation needs to be understood as only a very small part of a larger story of the history and politics of Lebanon which contributed to what has been called the "still born" implementation of e-government in Lebanon.

Keywords: e-government, e-administration, neoinstitutional theory, isomorphism, ICT adoption

1 Introduction

Electronic government has been a priority throughout the world for more than twenty-five years, viewed as a critical tool for efficient and effective public services. Evidence in the developed world reveals a number of successes; various reports demonstrate that this form of government has led to improvements in economic development, services, and the quality of governance (see Ahn and Bretschneider 2011; Kim et al. 2009). However, studies also indicate that more than 85 percent of e-government projects in developing countries can be classified as partial or total failures (Dada 2006; Gomez and Pather 2012; Heeks 2002, 2009; Hawari and Heeks 2010). According to some studies, these failures result because the majority of their citizens do not use the Internet and thus e-services, although an infrastructure exists (Basu 2004). Heeks (2002) and others contend, however, that these failures derive from the gap between design of the technology and its implementation context.

This is certainly the case for Lebanon, a developing country that, despite its serious economic difficulties and heavy debt, invested enormous sums of money since 2000 to build an e-government services infrastructure (OMSAR, 2001, 2003, 2009). Internet utilization (penetration) in 2000, when the e-government initiative began, was estimated at 6% of the population, increasing in 2008 to 24%, and 35% in 2011 (Miniwatts 2012), suggesting that the Lebanon was and remains far from attaining the government's goal of e-public services adoption. Indeed, some might argue that the Lebanese e-administration project arrived still-born. Why this assessment?

This paper presents preliminary findings from an ongoing study of e-government implementation in Lebanon. We examine this implementation of an e-government infrastructure in the *context of external pressures* that Lebanese public administrators confronted. We show that the objective of gaining legitimacy – eliciting support and underwriting by donor international agencies, trumped the reality of Lebanon's economic crisis, internal bureaucratic intransigence and structural incapacity, and limited ICT adoption by Lebanese citizens. It is, of course, a well-known story in ICT implementation in developing countries. This analysis triangulates evidence from semi-structured interviews with senior officials in government agencies who led the implementation effort, official government documents, and newspaper reports on the progress of this e-government project.

We respond to Yildez's (2007) call to e-government scholars to move the field forward by conducting studies that explicitly direct our attention to the "complex political and institutional environments in which e-government policy and development processes take place and to the use of process-oriented theory and methodologies and primary data gathered through interviews, participant observation, and archival analysis" (p. 660). We concur with Avgerou (2001) that we must understand the context of organizational change. We employ theory to strengthen our knowledge about ICT for development (ICT4D) by applying a neoinstitutional (aka "new institutional") theoretical lens to understand the role of external pressures that led the Lebanese public authorities to invest in information and communication technologies (ICT) and e-public services. As Powell (2007) notes, "A key analytical task for institutional analysis is to ascertain which factors are important in particular contexts and the extent to which the [regulative, normative, and cultural/cognitive] mechanisms work to reinforce the prevailing social order or undercut one another" (p. 976).

The paper is organized in the following way. Research on information technology and e-government adoption and implementation in developed and developing countries is vast and our audience well informed. We thus provide only a minimal description of what has been defined as "e-government" and its theoretical foundation of modernization and focus on the core concept of isomorphism of new institutional theory that is relevant to this case study (Section 2). How this case study was conducted is then described (Section 3). We describe the context for implementing Lebanon's e-government project between 2000 and 2008 (Section 4). We then discuss the relevance of the three forms of isomorphic processes (Section 5) and conclude with an acknowledgement of the limitations of our explanation and future research directions (Section 6).

2 E-government and institutional theory

2.1 The e-government concept as the “modernization effort”

The discourse of e-government in advanced and developing economies is infused with normative conceptions about government, civil society, the corporate sector, and citizens and their relationships. These may be deemed the rules and norms that shape, give meaning to, rationalize, and constrain choice by public officials. Derived from modernization theory of the 1950s, has been the presumption that “the transfer of capital goods, technologies, industries and Western norms to the developing countries would bring rapid economic productivity and social development in the developing countries, which were considered to be ancient and primitive” (Ojo 2004, p. 141). The New Public Management (NPM) model was heralded as a managerial alternative to the traditional model of public administration, introducing a “performance management system (PMS) with the aim of measuring and enhancing the success of public organizations and holding public administrators accountable for their performance and elected officials accountable for their leadership” (Ohemeng 2010, p. 457).

International development donor agencies and countries advanced an e-government (ICT) implementation agenda to modernize public administration in developing countries. The World Bank (2011) conceives of e-government as “the use by government agencies of information technologies...to transform relations with citizens, businesses, and other arms of government” in its role as service provider, from a “product- or process-centric” provider that serves citizens “to a customer-centric provider” (Deloitte Research in Ciborra 2005, p. 267). ICTs modernize the bureaucracy’s functions of production, coordination, control, and integration through computer networks and thus improve productivity, internal managerial efficiency, and the effectiveness of public service delivery to citizens (Bellamy and Taylor 1998). ICT implementation (e-governance) would enable good governance.

The conclusion of analysts of modernization efforts is that information systems and ICT adoption represents the implementation of forms of “techno-economic rationality of development that stem from Western conceptions of modernity,” that is, “the ultimate fundamental value” is “economic growth in a free market economy through IT adoption” (Avgerou 2000, p. 2). E-government represents “an organizing principle” (Avgerou, p. 2), an effort to “reorder” and “control organizational processes and structures through market mechanisms” (Ciborra 2005, pp. 261, 262). The emphasis is on efficiency, productivity, and transparency based on scientific (techno)-rationality. The restructuring of citizen-government relationships is governance by the marketplace according to the tenets of neoliberalism. Ciborra (2005) comments that the “model is supposed to address state failures due to governance breakdown, corruption, rent seeking, distortions in markets and the absence of democracy” (p. 269). The goal is to “destroy archaic superstitions and relations” that “should be applied at whatever social, cultural, and political cost” (Avgerou 2000, p. 6).

2.2 The status of public organizations under pressure: neoinstitutional theory in management, information systems, and e-government

All organizations are subject to internal and external pressures of legitimacy and competition (Carroll and Hannan 1989); organizations adapt not only to internal constraints but equally to values of the external society (Selznick 1949). These two types of pressures may explain whether or not organizations adopt technological innovations. Studies have shown that, in general, public organizations, more than other types of organizations, are uniquely subjected to external pressures of legitimacy but not to pressures of competition due to their reliance on resources from their environment (Lootvoet 2007; Pheffer and Salancik 1978; Suchman 1995). This suggests that adoption of e-administration by government agencies is not exclusively motivated by a search for efficiency. According to Naveh et al. (2004), early adopters of a management innovation act with the goal of maximizing alignment between the organization’s needs and proposals for the innovation. This may explain why certain developed countries were early adopters and implementers of electronic administration. However, according to Naveh et al., those late adopters did so under pressure of

external forces and thus imitate first adopters. This assessment is supported by Ciborra (2005), above all for those countries on route to development. In effect, according to Ciborra, e-government adoption does not automatically lead to better governance, but is the result of behavior whose objective is to increase assistance received from rich countries. We can, following Ciborra and Naveh et al., hypothesize that late adoption of e-administration and e-services by developing countries may be linked to social and institutional pressures and to imitation of other governments.

Some scholars propose a neoinstitutional theoretical lens and the concept of isomorphic processes to explain this phenomenon (DiMaggio and Powell 1983; Meyer and Rowan 1977). Although use of this theoretical lens has been dominated by sociologists of organizational behavior, it is increasingly employed by researchers in management science and information systems (see Dacin et al. 2002; Mizruchi and Fein 1999) to explain the phenomenon of new technologies adoption by businesses and organizations (see also Teo et al. 2003; Morris et al. 2005; Hu et al. 2007). Students of the introduction of information technology into government also find similarities in the nature of public administration's relationship with its environment to explain new technologies adoption (Gil-Garcia and Martinez-Movano 2007; Hjort-Madsen 2007; King et al. 1994). As such, these organizations, according to this theory, also conform to norms in order to convince their stakeholders.

Neoinstitutionalists consider the institutional environment as the principal explanatory factor of organizational behavior, above all if innovation adoption is not introduced prematurely (Naveh et al. 2004). Adoption, in this case, is not motivated uniquely by the search for efficiency. It can be implemented with the goal of realigning the organization with the expectations of its socio-economic environment. Meyer and Rowan (1977) underscore that adoption of an organizational form, management tools, or innovations can arise independently of control and coordination problems that an organization experiences. The former may be imposed by the organization's environment. In this case, the organization adopts new management practices in order to gain legitimacy and to increase its chances for survival.

This process is tied to social and institutional pressures (coercive isomorphism), to imitation of other organizational behaviour in the field (mimetic isomorphism), or to the phenomenon of professionalism (normative isomorphism) (DiMaggio and Powell [D&M] 1983). Moreover, as Mizruchi and Fein (1999) point out in their trenchant analysis, one or more and all three isomorphic processes of coercion, mimesis, and transmission of norms may operate.

Coercive isomorphism results from formal and informal pressures exerted by other organizations and by "cultural expectations in the society within which the organization operates" (p. 150) (D&M 1983, p. 150). External influences may be direct and explicit, imposed by the external organization on which the focal organization depends or indirect when an organization itself adopts an innovation with the goal of gaining the support of other important organizations in its field. Coercive isomorphism has been used in many studies in Information Systems to explain the adoption of an innovation or an information system (see Tolbert and Zucker 1983; Gular et al. 2002; Hu et al. 2006).

Uncertainty also encourages adoption (D&M 1983). As such, modeling (imitating) the behavior of other successful organizations that have adopted an innovation creates or enhances legitimacy (D&M, p. 151; Haverman 1993; Huault 2004). Adoption demonstrates that the organization is attempting to improve conditions for functioning. Imitation may be indirect or unconscious, above all when skilled employees transfer or move from one organization to another. Imitation may also be explicit when innovation adoption is the result of decision makers or employees recruited from an external organization. Consultants may also mediate certain behaviors and render them acceptable (D&M, p. 151). Information Systems researchers have utilized the concept of imitation to explain the wide scale adoption of integrated management information systems (Liang and Xue 2004; Teo et al. 2003).

The third source of isomorphic organizational change is normative pressures that "stem primarily from professionalization" (D&M 1983, p. 152). The more norms are accepted by a large proportion of organizations, the more other organizations are constrained to adhere to them. Once an innovation is

launched in the market, experts, consultants, producers, and professionals in the sector collectively evaluate and clarify its advantages (Swanson and Ramiller 1997); this evaluation process takes place during the assimilation of a technological innovation (Newell et al. 2000). In this sense, as certain studies have shown, a decision to adopt a technological innovation did not necessarily result from a search for economic optimization but rather from a search for conformity to the norms of a professional network that decision makers belong to (Markus and Tanis 2000).

3 Methodology

Following a case study methodology (see Yin 2003), this analysis is based on the triangulation of evidence from semi-structured interviews with senior officials in government agencies who led the implementation effort, government documents, and newspaper accounts on the progress of this e-government project.

These interviews were conducted in Beirut between January and December 2008 in Arabic with nine Lebanese civil servants who had been responsible for implementing e-administration between 2000 and 2008. Two were former ministers of the Office of the Ministry of Reform (OMSAR), six were directors general, and one a cabinet secretary. These civil servants represented, in addition to OMSAR, the ministries of Finance, Public Works, Telecommunications, and Economy. Interviews lasting between one and two hours were recorded and later transcribed in French. We maintain the anonymity of our informants by identifying them only with an alphabetic character and number (e.g., E1, E2).

These officials were asked to provide a history of the unfolding of the adoption of electronic government, e-services, and information and telecommunication technologies (ICT). There were questions about administrative needs and objectives, (quality and skills of) personnel required to implement the project, anticipated benefits, and resistance to the project inside the official's agency and in other agencies. Other questions asked about the role of international agencies, the European Union, and other Arab countries that underwrote funding for the e-administration project. And still other questions examined the status of ICT use and pressures for adoption by Lebanese citizens and the benefits that these officials envisioned.

The interviews were triangulated with official government reports, laws and regulations, and press releases and newspaper reports on the progress of this e-government project. Annual reports on the progress of the project were issued by OMSAR and other agencies. Arabic, English, and French language press accounts were reviewed. Web sites of the participating international and Lebanese government agencies were examined. (Page limitations do not permit a complete bibliography.)

4 Historical context for the failure to implement e-government

Lebanon was significantly damaged by 16 years of war, between 1975 and the mid-1990s, leaving its economy, infrastructure, physical assets, human resources, governance structure, and public administration in dire circumstances. Although the government had continued to function, the system was a disaster. Chaotic procedures had been applied and information had been recorded by hand on paper that had since yellowed. By the early 2000s, little had changed (Dagher 2002). For most Lebanese, public administration had always been a bureaucratic nightmare (Harfouche 2008). Lebanese citizens complained about the poor quality of public services, the complicated administrative procedures, arbitrary administrative decisions, slowness of decisions, and corruption. It was this situation that the reform effort was intended to alter.

Nonetheless, in spite of the economic difficulties and heavy debt, the Lebanese government did not hesitate to invest massively in implementing e-administration and e-services. As we noted earlier, studies of e-government in developing countries have shown widespread and significant failure. Lebanon's experience was not much different. Lebanon's government agency responsible for e-

government implementation OMSAR had carried out tests of e-services whose outcomes ended in failure. Computers with touch screens had been installed in the offices of senior administrators, for example, but remained unused or broke down and could not be repaired for lack of funds.

International agencies, including the United National Development Program (UNDP), the World Bank, the International Monetary Fund, and the European Union (EU) committed significant funds and loans to reconstruct the country following a series of aid conferences held in 2001, 2002, and 2007 that were dubbed Paris I, Paris II, and Paris. Aid from international agencies was designed to reform public administration and build infrastructure and was coupled with the requirement to implement a national e-government strategy and a national e-strategy, connecting greater accountability and transparency with good governance. European Union (EU) funds encouraged the Lebanese government to create the Office of Minister of State for Administrative Reform (OMSAR) in 2000 as a mechanism for coordinating donors and the government and to serve as the locus of administrative reform and implementation of e-government.

The continued flow of aid depended on meeting what international agencies deemed “adequate progress” and later “quantitative benchmarks.” Initially, rapid privatization of the public sector was viewed as the *only* goal and a means to reimburse part of the Lebanese debt. Pressure from the United Nations Development Program (UNDP) and the European Union (EU), however, became an important element in e-administration implementation progress after 2000. Thus, according to a report issued by OMSAR (2003): “It was widely accepted within the Lebanese government that any delay in the process of reform and modernization of the administration threatens the continuation of many programs funded by donor countries” (p. 6). Reform and administrative modernization depended on implementing e-government.

Once credits were granted, projects had to be designed and presented. Donors set the rules. For example, the European Union (EU) insisted that their experts supervise and participate in projects and the United Nations Development Program (UNDP) required that it participate in recruiting new employees. E6 acknowledged that the only Lebanese e-administration success was the implementation of a Ministry of Finance web portal for businesses to make electronic declarations, due to a team created by the UNDP and financed by donations from Canada (ACDI) and UNDP, benefiting from support from the Ministry of Finances, which had installed a completely integrated system.” (It received a United Nations prize in 2007.)

By 2003, the UNDP had imposed rules that the Lebanese e-government demonstrate progress in implementing e-government. And at one point, in 2004, the EU threatened to apply sanctions (withdraw funds and offer them to Jordan) if the Lebanese government did not comply with its commitments and sufficient progress were not made. It was at this moment that the Hariri government understood that action had to be taken to implement an e-government strategy or else funds would be lost.

One might conclude that, little by little, the Lebanese government was led to implement e-administration with the goal of obtaining funding support and help of funding organizations. Closer to the truth one official said was that “our objective was *not* to implement these services. The sole objective was to rapidly privatize the public sector in order to reduce the public debt” (E1). It was “the European Union that, in 1996, launched this e-government project and made available [funds] for administrative reform and information and telecommunications technologies” (E2). A third informant recalled that “these funds encouraged the Lebanese government to create the OMSAR” (E8).

We might conclude that adoption resulted from external and explicit institutional pressures of international organizations. “The United Nations Development Program (UNDP) proposed that we imagine a ‘national e-strategy’ that Lebanon would be part of. [This] strategy would prepare Lebanon to implement e-government” (E1). Funding was “open-ended; however, once the credits were received, presenting a project became an imperative [and] so we defined an ‘e-government strategy’” (E4).

But on the technical side, “we had a public administration that was very backward, completely without information systems. The funding agencies, arriving with their ideas and knowledge of the terrain, imposed their plans” (E5). Another informant (E2) commented that “We were required little by little to introduce these systems through OMSAR and, so, OMSAR’s teams went into each agency and intervened permanently [became responsible for implementation].”

In effect, “from the very beginning, the e-administration project made no progress because government support was lacking” (E1). Informant E4 explained that “We had to create an infrastructure, provide equipment, and create personnel, all without conflict.” He went on to say that “Obstacles surfaced when it came time to implement e-services. We lacked qualified personnel, staff resisted because they risked losing their authority, and there was no political support.”

E5 commented that management changed when the agencies got “new blood.” Informant E6 went on to explain that both the UNDP and the European Union required training sessions for the new recruits and “measures were drastic. The only ones who remained were the ‘cream.’” Government in-house training was then followed by training abroad, all of which took place through bilateral cooperation with Spain and the bilateral agreements with France.

Influenced by and with the participation of the UNDP, “The Lebanese government recruited young, highly competent professionals. That did not exist before 1996,” remarked E3. “Our personnel was relatively old; the average age of the bureaucrats was between 48 and 50 years old...Some division heads did not even know how to use a computer” (E5). In effect, “for many years, there was no recruitment; indeed, the last recruits date from 1986. Technology changes from one year to the next. Thus the major problem that delayed the adoption of ICTs has been the lack of qualified personnel who know how to use ICTs” (E5).

Pressure from funding agencies (UNDP) and the European Union (EU) was, however, an important element in implementing e-administration; and this pressure continued for years. UNDP “imposed rules that required us to implement electronic administration [and] the European Union (EU), in 2001, which provided assistance, also applied sanctions when our government did not follow the rules that had been laid down” (E1). At a certain moment, “when the EU was unhappy with the results, such as when the Lebanese administration did not respond to the Union’s demands, it threatened to withhold funds and to provide them to Jordan, about 30 million Euros” (E2). And, as such, according to the OMSAR report published in 2001, “the government admitted that any further delay of the reform process and administrative modernization threatened a great number of projects financed by the funding agencies” (OMSAR 2001). Lebanese government officials were, however, able to persuade the international agencies that progress would be made and were able to mobilize a plan that resulted in significant financial assistance in international aid. The International Monetary Fund congratulated Lebanon for its economic reform and public debt reduction efforts.

“We went to Paris II [2002] with our project for modernizing public administration and adopting e-government. After having received funding and assistance, nothing was accomplished, [however]. We had to act very quickly. But the results were deceiving. And, so, just as we had done earlier, we had to increase our activities. The financing agencies demanded results. So, three weeks before Paris III [2007], we created the TRA. That’s how we operated, sadly” (E9). E6 commented that “the International Monetary Fund, the World Bank, and Paris III continued to have a great deal of influence. Paris III, for example, required that we present reports about the level of citizen satisfaction with e-services. That allowed us to move in the right direction.”

5 Discussion

The results of these interviews converge with studies in Information Systems that demonstrate the importance of coercive isomorphism in the adoption of a technological innovation. This case shows the importance of formal rules and sanctions by organizations in order to increase coercive pressures.

Certain elements of this case appear to reflect direct mimetic isomorphism. In effect, from the beginning, the implementation project of e-administration presented a great deal of uncertainty. Faced with pressure from funding agencies that wanted a real project and faced with the difficulty of finding solutions, the Lebanese government judged it legitimate to “do like everyone else” (direct mimetic isomorphism). The explanations by Lebanese administrators converge with findings by Teo et al. (2003) and Liang and Xue (2004), for example, who have demonstrated the importance of mimetic processes in this type of adoption.

Other aspects reflect indirect or unconscious mimetic processes explained by the transfer of employees and explicit mimetic processes resulting from the advice of consultants. The Lebanese e-administration project was equally influenced by experts and consultants. This case shows the value of the role of indirect mimetic processes that result from recruiting decisions made by the Lebanese who had conducted their studies abroad and who had worked in foreign public administration. The quality of work by this team encouraged other ministers. At this level, adoption can approach indirect imitation.

The UNDP and the European Union required international professional recruitment and training of the team, which led to successful completion of two e-administration projects and which suggests that the requirement had some, albeit quite modest, influence on the decision to implement e-administration. This may reflect a certain form of normative isomorphism.

6 Conclusion

We briefly examined a puzzle that has bedeviled Lebanese public administration for more than a decade: little concrete progress to implement e-government after receiving billions of dollars, leading international agencies to conclude that insufficient progress had been made and to refuse commitment of additional resources. At the same time, however, threatened with the loss of donor funds, the Lebanese government was eventually forced to take some steps towards implementation: trained staff was recruited and experts and consultants brought into public administration, and these actions did make a difference. As such, under certain conditions, adoption *does* result from external institutional pressures. And to coercive isomorphism, we also need to add the role of direct, unconscious, and explicit mimetic isomorphic processes, along with a search for professionalism.

Nonetheless, this research poses many questions and requires a much deeper and more extended analysis; there is much greater complexity than the story of isomorphic processes experienced by Lebanese public administration. The Lebanese government adopted e-services to demonstrate a rational approach to government decision making and to justify other business activities at the heart of the administration in order to persuade international agencies to fund its government modernization program. As applied to Lebanese e-public services, this is also a story about technology adoption as a symbolic form. We leave the role of culture, tradition, internal public administration politics, and symbolic action for a future study. This requires an analysis of the micro-level reaction to macro-level pressures experienced by Lebanese public administration.

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