Kuwait Programme on Development, Governance and Globalisation in the Gulf States

The state of e-services delivery in Kuwait: Opportunities and challenges

Hendrik Kraetzschmar and El Mustapha Lahlali

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

January 2012

Number 20

The Kuwait Programme on Development, Governance and Globalisation in the Gulf States is a ten-year multidisciplinary global programme. It focuses on topics such as globalization, economic development, diversification of and challenges facing resource-rich economies, trade relations between the Gulf states and major trading partners, energy trading, security and migration.

The Programme primarily studies the six states that comprise the Gulf Cooperation Council – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. However, it also adopts a more flexible and broader conception when the interests of research require that key regional and international actors, such as Yemen, Iraq, Iran, as well as its interconnections with Russia, China and India, be considered.

The Programme is hosted by the LSE's Department of Government, and led by Professor David Held. It supports post-doctoral researchers and PhD students, develops academic networks between LSE and Gulf institutions and hosts a regular Gulf seminar series at the LSE, as well as major biennial conferences in Kuwait and London.

The Programme is funded by the Kuwait Foundation for the Advancement of Sciences.

www.lse.ac.uk/LSEKP/

The State of e-Services Delivery in Kuwait: Opportunities and Challenges

Research Paper, Kuwait Programme on Development, Governance and Globalisation in the Gulf States

Hendrik Kraetzschmar
Arabic and Middle Eastern Studies
University of Leeds
h.j.kraetzschmar@leeds.ac.uk
and
El Mustapha Lahlali
Arabic and Middle Eastern Studies
University of Leeds
e.m.lahlali@leeds.ac.uk

Published in 2011.

The State of e-Services Delivery in Kuwait: Opportunities and Challenges

HENDRIK KRAETZSCHMAR AND EL MUSTAPHA LAHLALI*

Abstract

This paper reviews the state of e-government services delivery in Kuwait as of 2011. Disaggregating e-government to its component units, it compares and contrasts the functionality and maturity of e-services provided on individual ministry websites and the Kuwait Government Online (KGO) portal, which was established in 2008 to provide a 'one-stop' centre for government-to-citizens (G2C) and government-to-business (G2B) interactions and transactions. Drawing on field research in the country, the paper argues that whilst significant strides have been made in the development of e-government since the early 2000s, key challenges remain in the delivery of user-friendly and customer-oriented web-based e-services to citizens and residents. These pertain to an incomplete synchronization of e-services between the KGO portal and individual ministry websites, the limited availability of full e-services across government agencies, the absence of any integrated e-services involving multiple agencies, and the questionable value of some of the e-services provided. According to the authors, progress in the development of integrated e-services is impeded not so much by technological barriers, or by human capacity problems and levels of information and computer technology (ICT) usage, as by the absence of an enabling regulatory environment and the limited efforts presently made by government agencies at cross-departmental cooperation.

Keywords

Kuwait, e-government, G2C, e-services maturity, challenges

1. INTRODUCTION

Electronic government, also known as *e-government*, has fundamentally transformed the internal workings of public administrations and the manner in which they interact with their populace. Nowhere is this more evident than in the countries of the Gulf Cooperation Council (GCC), where, little constrained by financial imperatives, rulers have wholeheartedly embraced this innovative way of conducting the day-to-day business of government, driving forward ambitious e-government projects. It comes as no surprise, then, that as of 2010 three of the six GCC states – Bahrain (ranked at 13), the United Arab Emirates (UAE) (49) and Kuwait (50) – rank amongst the 50 top performers on the United Nations (UN) e-government development index (United Nations 2010: 114–15).

* The authors wish to thank the LSE's Department of Government for making this research project possible, and the Central Agency for Information Technology (CAIT) in Kuwait for its critical feedback on this paper.

Following Silcock (2001: 88), e-government is here defined in the broadest possible sense as 'the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees'. Multidimensional in scope, e-government thus refers to the following sets of interrelationships based on information and communications technology (ICT): *government to government* (G2G), *government to employees* (G2E), *government to citizens* (G2C) and *government to business* (G2B).[1] To date, the most common form of e-government is internet-based, as is evident in the rapid spread and ever-growing sophistication of government websites across the globe. Yet e-government, as understood today, is not only limited to the internet, but also includes a variety of non-web-based ICTs for interaction and transaction purposes, such as telephony and short message service (SMS) text messaging, mobile computing, and other types of audio and video transmissions.

This paper is concerned with the state of *web-based* e-government services delivery (henceforth referred to as e-services) for citizens and residents in Kuwait; that is, with G2C interactions and transactions.[2] Disaggregating e-government to its component units, the paper seeks to compare and contrast the functionality and maturity of e-services provided on individual ministry websites and the Kuwait Government Online (KGO) portal, which was established in 2008 to provide a 'one-stop' centre for G2C and G2B communications. Since the inception of its e-government project in 2000, the Kuwaiti authorities have made significant strides in the provision of online information and services for citizens, residents, businesses and foreign visitors. This is most apparent in the country's impressive rise through the ranks of the UN's global e-government development index, from rank 90 out of 183 listed countries in 2003 to the top 50 only seven years later. The KGO portal apart, as of 2011 virtually all government ministries and most other government agencies are present online, offering a host of information and basic online services to its users, with some even facilitating payment transactions. These developments are mirrored by year-on-year growth in internet user rates (which presently stand at almost 40 per cent of the total population) and a steady growth in online traffic on the KGO portal, all of which are promising signs that ICT

[1] For an overview of the perceived/real benefits of e-government see, for instance, Ndou (2004); United Nations (2010: 26–8).
[2] Not addressed in this paper, therefore, are G2B e-services and any non-internet-based forms of G2C interactions.

literacy is on the rise, and that more and more Kuwaiti citizens are equipped with the necessary skills to interact with government online.[3]

It is the contention of this paper, however, that despite these significant strides in e-government development since the early 2000s, key challenges remain in the delivery of user-friendly and customer-focused online services to citizens/residents. These pertain, amongst others, to an incomplete synchronization of e-services between the KGO portal and individual ministry websites, the limited availability of *full* e-services across government agencies, the absence of any *integrated* e-services involving multiple agencies, and the questionable value to users of some of the e-services provided. Whilst more research on the matter is required, the preliminary findings of this study suggest that progress in the development of integrated e-services, rather than being held back by technological barriers or human capacity problems and levels of ICT usage, is impeded by the absence of an enabling regulatory environment and the limited efforts presently made by government agencies at cross-departmental cooperation. The Kuwaiti e-government project has thus reached a critical juncture in its development, with any further progress towards international best practice in e-services delivery hinging in large measure upon the passage of enabling legislation and the willingness of key stakeholders to move towards *connected/networked* e-government; that is, from a compartmentalization of e-services delivery towards close cross-agency collaboration and data sharing.

As of yet, little research is available on e-government in Kuwait. A number of broader comparative analyses of e-government initiatives in the GCC apart,[4] only a handful of studies have been conducted on how this technological revolution in the relationship between government, businesses and citizens has been embraced in Kuwait. Boujarwah's (2006) review of e-government initiatives in Kuwait is probably one of the first such studies in the field. Relying predominantly on content analysis, he assesses the state of web-enabled G2C communication across government agencies, and concludes that as of 2006 few agency websites had moved beyond the provision of basic information; that is, beyond the stage of 'one-way interaction'. At the time, Boujarwah concluded that a number of obstacles needed to be overcome to facilitate more broadly the adoption of online services for citizens/residents. These included the need to retrain government staff, a majority of whom are working in service delivery, and issues surrounding privacy and security of personal information. As far

[3] For internet user statistics in Kuwait between 2000 and 2010 see, for instance, Internet World Stats (*n.d.*, a). For KGO online traffic figures see Central Agency for Information Technology (2010).
[4] See, for instance, Awan (2003); Kostopoulos (2004); Sahraoui (2005); Al-Khouri and Bal (2006); Murphy (2006); Chatfield and Alhurjan (2009).

as the quality of web content across government agencies is concerned, the author also noted several shortcomings, including the prevalence of Arabic-language-only sites, the unavailability of payment transaction facilities and the lack of disability provisions, to name a few. Whilst some of the challenges and shortcomings in web-based e-services delivery highlighted by Boujarwah remain of relevance, overall his study has been overtaken by significant advances in e-government in Kuwait since 2005/6, including the introduction of the KGO portal.

More recent scholarly work on e-government in Kuwait includes studies by Zaied, Khairalla and Al-Rashid and by AlAwadhi and Morris. Assessing levels of e-readiness in Kuwait, Zaied et al. (2007), for instance, explore civil servants' perceptions of the IT environment in a number of government agencies. The study reveals that as of 2007 a majority of those questioned on the matter felt the IT infrastructure in their agencies was sufficiently advanced to facilitate the effective adoption of e-government projects, even across agencies, and that levels of ICT support and training were adequate. The findings thus seem to support the assertion of this paper that technological barriers are not at the heart of impediments to further progress towards *networked* e-government in Kuwait. AlAwadhi and Morris (2008), in turn, take a 'user-centric' approach to examine e-services usage amongst graduate students at Kuwait University. Drawing on quantitative methods, the authors show that, whilst in 2008 a majority of students did not use the government services provided online, most respondents were overall favourably inclined towards the provision of such e-services, so long as these involved tangible benefits, such as savings in time, costs and effort. According to the authors, their findings have broader implication for e-government developers, who need to ensure that the e-services provided are user-friendly, time efficient, secure and genuinely useful if they are to generate public acceptance and thus increase overall adoption rates.

The present paper situates itself within the nascent literature on e-government in Kuwait in the following two ways. First, building on Boujarwah's earlier work, it provides an up-to-date content analysis of the state of e-government projects across government agencies, including this time the KGO portal. With a focus on e-services delivery, this research draws on Chatfield and Alhujran's (2009) four-stage model of e-government maturity to compare and contrast the performance of individual ministry websites and the KGO portal, thus facilitating future cross-country and longitudinal comparisons on the subject. Second, like AlAwadhi and Morris, we adopt a user-centric perspective to our analysis of e-services delivery in Kuwait, the difference being, however, that we here focus more in depth on some

of the issues that shape user perception and adoption rates of e-government, such as the accessibility and relevance of the e-services provided.

The empirical data for this research is drawn from original field research conducted in Kuwait in January 2011 and a content analysis of e-government services provisions on ministry websites and the KGO portal, in both Arabic and English. During the field trip to the country, the authors conducted a series of semi-structured interviews with stakeholders in the design and delivery of e-services in the ministries of the Interior and of Electricity and Water, and with senior managers at the Central Authority for Information Technology (CAIT). Established in 2006, this authority is responsible for, amongst other things, the coordination and supervision of e-government projects in the country. The interviews were conducted to pinpoint the strategic vision for the delivery of web-based e-services across government agencies and the KGO portal, and to understand better the challenges being faced in the implementation of this vision.

The remainder of this paper is organized as follows. Section 2 reviews the extant literature on e-government, focusing in particular on academic output dealing with G2C communications and e-services delivery. Section 3 examines the state of e-government in the countries of the GCC, of which Kuwait is a member state. The section serves to position the development of e-government in Kuwait within the context of similar initiatives in its immediate geo-political environment. A critical reflection on the current state of web-enabled G2C interactions and services in Kuwait then follows in section 4, with a conclusion in section 5.

2. MEASURING E-SERVICES MATURITY

With the number of e-government initiatives increasing since the mid-1990s (Al-Kibsi et al. 2001), research on e-services development has also gained momentum. Indeed, numerous studies are now available which seek to examine and measure the stages of online services' growth and maturity. These studies include both academic pieces and ones undertaken by commercial enterprises. In 2000 the Gartner Group, for instance, classified e-government services delivery into four evolutionary phases/stages: 'publishing' (web presence), 'interacting', 'transacting' and 'transforming' (Baum and Di Maio 2000). *Publishing* is the earliest stage, in which basic information (i.e. databases, services, phone numbers, etc.) is made available to citizens online. This is followed by an *interacting* stage which enables citizens to interact with government online. Whilst the *transacting* stage allows users to

conduct a complete transaction online, such as paying for licence renewals, paying taxes or fees, or submitting bids for procurement contracts, *transforming* is the final stage in which all government operational functions are fully integrated, organized and personalized.

Following the stages model, and in their attempt to examine transformations within government structures as they 'make transition to e-government', Layne and Lee (2001) also proposed an e-government growth model with four stages, which they label 'cataloguing', 'transaction', 'vertical integration' and 'horizontal integration'. The first stage refers to the governments' concerted efforts to make information and data available online to citizens and businesses (databases, publications, downloading of forms, etc.), whilst the second stage is designed to allow governments and citizens/businesses to pursue electronic transactions. Examples of such e-transactions include renewing licences and paying fines online. The third stage refers to the connection of different government agencies to provide *integrated* e-services for citizens/businesses. As most public services involve multiple government agencies, this stage in e-government development is critical in driving forward the provision of a full range of online services. The fourth and final stage refers to the creation of a 'one-stop' government portal for G2C and G2B interactions and transactions.

Layne and Lee's model is undoubtedly useful in evaluating the process and development of e-government structurally. The model appears less suitable, however, for evaluating the maturity of e-services delivery, given its focus on the technological and organizational aspects of e-government development, which are beyond the scope of this paper. What is more, both the Gartner and the Lyne and Lee models of e-services maturity can be criticized for not offering a stage on e-democracy; that is, on the provision of e-participation features online (Siau and Long 2005: 451).

Other, more extensive e-services maturity models, featuring e-democracy stages, have been presented by, for example, Hiller and Bélanger (2001), Moon (2002), West (2004) and Chatfield and Alhujran (2009). In their study of privacy and security concerns in e-government in the United States, Hiller and Bélanger (2001), for instance, proposed a model with five stages, which consist of 'information', 'two-way communication', 'transaction', 'integration' and 'participation'. Drawing on the Hiller and Bélanger and the Layne and Lee models, Moon (2002) also proposes one with five stages, consisting of 'simple information dissemination' (one-way communication), 'two-way communication' (request and response), 'service and financial transaction', 'vertical and horizontal integration' and 'political participation'. Upon closer examination the Moon model lacks originality, however, as it is a

near replication of those of Hiller and Bélanger and of Layne and Lee. Although Hiller and Bélanger have produced a solid stages model of e-services delivery, they have come under criticism for being very generic in their approach, and for not producing any detailed categorization of services (Siau and Long 2005: 451).

West (2004), in his analysis of the impact on public sector service delivery and citizens' attitudes about e-government, also used a stages model of e-services maturity, although in his analysis the total number of stages was again reduced to just four: 'the bill-board stage', 'the partial-service-delivery stage', 'the portal stage, with fully executable and integrated service delivery' and the stage of 'interactive democracy with the public'. According to West, his model allows researchers to evaluate agencies' progress on the basis of the features incorporated in their websites. Whilst maintaining that this model could be useful for measuring e-government development and maturity, West concedes that the above categorization does not necessitate that all government websites go through these stages or that they undertake them in this particular order (2004: 17).

Although relevant to the study of e-services growth and maturity, all of the above models are problematic in so far as they lack a clear categorization of the types of services to be expected in each of the stages of e-services maturity. This lack of a clear categorization renders impractical the use of the above stages models in further analyses of individual country cases and broader cross-national comparisons of e-services maturity.

Addressing these shortcomings, Chatfield and Alhujran, in a 2009 study of online government in the Arab world, developed a framework of analysis that includes evaluation criteria of the service categories expected in each of the four progressive stages of e-government development they identified. As is shown in Table 1 overleaf, these stages are 'one-way information flow', two-way interaction', 'payment transactions' and 'e-democracy'.

Chatfield and Alhujran's model thus combines approaches of using stages as a guideline to determine levels of e-services maturity with a more detailed description of the e-services categories expected in each of their stages. These authors have thus introduced a much-improved framework for evaluating e-services development, which can be employed for a range of single-case and comparative analyses. As clearly highlighted in Table 1, for each of the four stages identified, the authors produced a set of questions to evaluate the level of maturity of the e-services provided. Thus defined, the model was used by Chatfield and Alhujran to assess the maturity of e-service delivery in sixteen Arab countries. Its content analysis apart, their model suffers, however, from a lack of empirical investigation into the

Table 1. Criteria used to evaluate Arab e-governments

Stages	Evaluation criteria
One-way information flow	Are these e-government websites and/or e-government portals? Is contact information provided in the websites? Are the government policies and documents available online? Is a search capability provided?
Two-way interaction: 'two-way information exchange between government and the public'	Can citizens upload forms and reports? Can citizens contact government agencies via e-mail? Is there an SMS gateway?
Payment transactions: 'e-Government service delivery at this stage offers online financial payment transaction capabilities'	Can citizens conduct secure online payment transactions through e-government portals and/or e-government websites?
e-Democracy: 'e-Government service delivery at this stage enables the public to participate in the process of public consultations and policy making'	Is there evidence of the provision of the following e-democracy capabilities? e-voting (pilot and at polling stations) e-petition online discussion forums online poll/survey feedback on policies and activities

Source: Chatfield and Alhujran (2009: 158).

factors driving forward and/or impeding advances in e-service delivery across the Arab world. More importantly, some of their evaluation criteria in their four-stage model remain broad and seem to lack a clearly defined list of the types of e-services expected in each individual stage.

To address these shortcomings of the Chatfield and Alhujran methodology, we decided to (1) develop a more detailed e-services maturity model for G2C interactions that marries Chatfield and Alhujran's stages approach with the United Nations' (2010) e-services maturity criteria, thus providing a clearly defined list of service categories expected in each of the four stages; and (2) supplement our content analysis with field research in Kuwait to gain further insights into the drivers and obstacles of e-services delivery in the country. The e-services maturity model thus devised is shown in Table 2.

Thus modified, the Chatfield and Alhujran model will be used to compare and contrast levels of e-services maturity across government ministries and the KGO portal in Kuwait. As is shown in Table 5 below, it will enable us to quantify the number of service categories available on agency and portal web pages for each of the four stages of e-services maturity, and thus provide a rudimentary rank order of the performance of individual government ministries in providing public services online.

Table 2. Web-based G2C e-services maturity

Stages (and number of service categories)	Services provided
One-way information flow (6)	Search facilities
	Contact details, opening hours, departments, links to other ministries/agencies
	Publications and other information (public policy, governance laws, types of services provided)
	Databases/statistics
	Downloading/printing of forms
	Advice/announcements
Two-way interaction (4)	Emailing, complaint/feedback box, information request on government policies/programmes, reporting incidents
	Completion and submission of online applications without fee payments (permits, licences, certificates, benefits, passports)
	Online job applications
	Helpline
Payment transactions (6)	Paying taxes
	Paying service charges/fees
	Paying fines
	Paying bills (water/electricity)
	Benefits processing and receipt (child benefit, housing benefits, etc.)
	Completion and submission of online applications with fee payments (permits, licences, passports, etc.)
e-Democracy (4)	Formal online e-consultation facilities (e.g. government consultation on draft policy proposals, draft regulations, etc.)
	Online polls/surveys
	Open-ended discussion forum (e.g. blogs)
	e-Petitions

3. THE STATE OF E-SERVICES DELIVERY IN THE GCC

Since the early 2000s, GCC governments have made tremendous efforts in making information and e-services available to their citizens, residents and businesses (Awan 2003; Kostopoulos 2004). These efforts are highlighted in the 2010 UN e-government report, which documents a steady rise in the global e-government development ranking for all GCC countries since 2003 (United Nations 2010: 114–15). Indeed, as is evident in Table 3 overleaf, across the board GCC countries have made significant strides in enhancing e-government provisions, although marked differences are still detectable in their overall levels of e-readiness, which can be defined as the readiness of governments in using 'the opportunities offered by ICT to improve the access to, and the use of, ICTs in providing basic social services' (United Nations 2005). By 2010, Bahrain, for instance, had taken the regional lead in

Table 3. UN e-government development rankings, 2003–10

	2003			2005			2008			2010		
	Score	Gl.	GCC	Score	Gl.	GCC	Score	Gl.	GCC	Score	Gl.	GCC
Bahrain	0.510	46	2	0.528	53	2	0.572	42	2	0.736	13	1
Kuwait	*0.370*	*90*	*4*	*0.443*	*75*	*4*	*0.520*	*57*	*4*	*0.529*	*50*	*3*
UAE	0.535	38	1	0.571	42	1	0.630	32	1	0.534	49	2
Oman	0.355	98	5	0.340	112	6	0.469	84	6	0.457	82	6
Qatar	0.441	77	3	0.489	62	3	0.531	53	3	0.492	62	5
KSA	0.338	115	6	0.410	80	5	0.493	70	5	0.514	58	4

Sources: United Nations (2003, 2005, 2008, 2010).

Notes: GCC = Gulf Cooperation Council; Gl. = Global; KSA = Kingdom of Saudi Arabia; UAE = United Arab Emirates.

e-government maturity, followed by the UAE and Kuwait.[5] At the bottom of the regional table are the Kingdom of Saudi Arabia (KSA), Qatar and Oman. It is noteworthy in this context that, of all the GCC countries, the KSA and Kuwait have made probably the most significant strides since 2003 in enhancing their e-government provisions, with the KSA moving from sixth to fourth place and Kuwait from fourth to third in regional ranking.

The desire of GCC governments to make information and services available online and easily accessible to citizens/residents and businesses is clearly manifest in the ever-growing sophistication of government agency websites and the creation of e-government portals, which have now been introduced in all member states. As Kostopoulos (2004) points out, e-government portals were introduced in the region to serve two main objectives: one international and outward-looking, and one national and inward-looking. As far as the former is concerned, the introduction of e-government portals is widely regarded by GCC member states as being of strategic importance. According to Kostopoulos, the aim is to render these portals 'worldwide showcases' and 'permanent promoters' of these countries' policies and services internationally, and thus to advertise to the international community their advanced knowledge society and business-friendly environment. The national objective, on the other hand, takes an operational form, with the portal being considered a 'national web depository' for citizens/residents and businesses (Awan 2003; Kostopoulos 2004). Government portals are

[5] Bahrain's recent advances in e-government are in large measure facilitated by ongoing efforts at economic diversification, which include heavy investment in the country's ICT infrastructure. Bahrain's efforts to integrate ICTs into its economic infrastructure have yielded some significant results such as the installation of the Government Data Network Project, which has supported the country's e-government strategy. At the heart of this strategy has been the introduction of a national smart card system which allows citizens to carry out e-transactions for various services. See Naseeb et al. (2008).

thus meant to serve as 'one-stop' centres, allowing a broad range of users to find and easily access relevant information and services in one consolidated space and without knowledge of individual ministry web pages and services. In 2006 the UAE, for instance, clearly articulated its vision of 'enabling integrated policy formulation by facilitating a knowledge-based world class government'. To achieve this vision, the UAE government has revamped its online presence and 'integrate[d] information and services into a single gateway where its services can be easily located' (United Nations 2006: 7). As will be discussed below, in 2008 Kuwait also created a central government online portal (the KGO portal), which serves as a 'one-stop' centre for the provision of government information and services online.

Whilst the UAE and Kuwaiti visions have been launched to develop their e-government services and capabilities further, the e-government initiative in the KSA was launched with a clear focus on improving its ICT infrastructure, which, it was hoped, would lead to improving e-government service delivery to citizens and businesses. To this end, the KSA started to liberate the telecommunication sector through privatization and competition (Abanumy et al. 2005). As a result of this action, both internet and mobile penetration have increased dramatically. Since 2001, the Saudi government has launched a number of initiatives under the National Information Technology Plan (NITP) to improve its IT infrastructures and provide support for the country's e-learning and e-government projects. However, analysis of Saudi ministry websites seems to suggest that as yet there is a lack of emphasis on these as platforms for delivering services to citizens online (Relyea 2002). Recent studies on e-government initiatives in Saudi cities seem to reiterate the same findings. In their analysis of e-government initiatives in the municipality of Madinah, Al-Sobhi, Kamal and Weerakkody (2009) have concluded that e-government initiatives in the city are still in the 'initial' stage.

The Qatari government vision for e-government, on the other hand, looks ambitious when compared to that of the KSA and other GCC countries. As spelled out on its portal, the Qatari government seeks to provide 'online services, anytime, anywhere, providing government transactions, information and knowledge' (Qatar e-Government 2006). The Qatari government's effort of advancing its e-government project was recognized in the 2005 UN e-readiness report, which considered it regional best practice; however, subsequent research on Qatari e-services delivery paints a rather different picture, suggesting that much more work is needed to enable the government in Doha to provide efficient and user-friendly services to citizens, residents and businesses online (Al-Shafi and Weerakkody 2007). Indeed, as Weber points out, other areas in ICT usage, such as e-learning and e-health, are far more advanced

Table 4. Websites assessment in GCC countries, 2003

	Features	Site evaluation	Services	Response time	Total	Rank
UAE	5.8	11.0	1.03	0.27	18.50	1
Qatar	5.5	10.0	0.67	0.70	16.67	2
Bahrain	5.7	9.2	0.80	0.40	16.03	3
Kuwait	5.8	9.0	0.60	0.33	15.83	4
Oman	5.3	7.5	0.70	0.50	13.90	5
KSA	5.0	7.3	0.67	0.27	13.24	6
Maximum possible	*12.0*	*27.0*	*10.00*	*0.43*	*44.00*	

Source: Awan (2003: 502).
Notes: KSA = Kingdom of Saudi Arabia; UAE = United Arab Emirates.

than online government. In e-learning, for instance, Qatar has exerted much effort in upgrading its primary and secondary education system. A case in point is the country's Knowledge Net, a portal that encourages online communication between parents, students and teachers (Weber 2009).

Drawing on these self-professed e-government visions, several studies have examined in more depth the state of e-services delivery in the GCC countries. Varied in focus, these studies include content analysis of web-based e-services, research on the impact of IT infrastructure on the delivery of e-services, and citizen-centric analyses of e-services accessibility and user-friendliness (Abanumy et al. 2005; Al-Khouri and Bal 2006; Chatfield and Alhujran 2009). In 2003, for instance, Awan examined over 150 government websites of six GCC countries, quantifying and detailing the type and nature of e-services and features available to citizens, as well as examining the existing variation across the GCC countries. In his ranking of the GCC countries, Awan created an index for each website based on features centring on 'citizen contact material, services and information, addresses, publications, databases, foreign language access, privacy policies, email contact information, and search capabilities' (2003: 502). As is shown in Table 4, his findings show that all GCC countries had made some strides towards placing information and services online; however, there was considerable variation across GCC countries in terms of the features and services available online, with the UAE receiving the highest score for features, whilst the KSA received the lowest. The KSA's low performance at the time was attributed to the low penetration of the internet in the Kingdom.

Following on from Awan, Chatfield and Alhujran in their more recent study (2009) also compare and contrast the state of e-services delivery across sixteen Arab countries. Measuring e-services delivery capabilities in each stage using the above-mentioned four-progressive-stages model (see Table 1 above), these authors assert that as of 2009 all GCC countries were

located in the first stage of e-government development, with some having advanced towards service provisions in stages two, three and four. Cases in point are the UAE, Bahrain, Qatar and Kuwait, all of which provide 'two-way interaction' services between government and citizens/businesses, and a limited range of e-democracy capabilities. As for online payment transaction capabilities, Chatfield and Alhujran assert that only the UAE, Bahrain and Qatar provide these services to their citizens/businesses.[6] On the basis of their findings, the authors have clustered Arab countries into three distinct groups of e-services maturity: 'Arab e-government leaders', 'Arab e-government up-and-comers' and 'Arab e-government laggards' (Chatfield and Alhujran 2009: 160–1). Given their higher levels of e-services maturity, the UAE, Bahrain and Qatar are placed in the group of Arab e-government leaders, while Kuwait, Oman and the KSA are clustered into the group of e-government up-and-comers. According to the authors, what sets the three regional e-government leaders apart from the rest of the Arab countries is their focus on providing 'a single-entry-point material e-government portal and … payment transaction capabilities to users of e-government services'.

Two points transpire from the Awan and the Chatfield and Alhujran analyses. First, they reveal that since 2003 most GCC countries have made significant headway in advancing e-service delivery to citizens and businesses, moving beyond the stage of 'one-way information' flows to two-way interactions and even beyond. Second, the analyses highlight ongoing discrepancies in levels of e-services maturity between GCC member states, and thus pinpoint a number of obstacles these countries face in driving their e-government projects forward. According to various scholars working on the GCC, the key obstacles here pertain primarily to (1) computer literacy and accessibility issues (Abunamy et al. 2005), (2) citizen attitudes and trust, (3) change management issues (Al-Shafi and Weerakkody 2007) and (4) the absence of an enabling environment. In the following paragraphs these obstacles will be fleshed out in more detail before the paper moves on to the study of e-services delivery in Kuwait.

3.1. Computer literacy and accessibility

Whilst overall literacy rates are very high across the GCC, this does not apply to *computer literacy* rates, which can be defined as the knowledge and ability to use computers, with a range of skills that would allow access to applications and programming (US Congress, Office of Technology 1984: 234). According to Pons (2004), although an impressive 42 per cent of all internet users in the Arab world are concentrated in the Gulf region, there remains a

[6] As will be highlighted below, since 2009 Kuwait has also launched several online payment transaction services.

significant digital divide between generations in the countries of the GCC. In the KSA, for instance, this digital divide is apparent not only amongst citizens but amongst the workforce in different government agencies. As far as the former are concerned, Hammer and Al-Qahtani (2009) have shown, for instance, that the generational divide in computer literacy in the KSA constitutes a major obstacle in the advancement of online government in the country. This conclusion was also drawn by Al-Sobhi et al. (2009) in their analysis of e-government in Madinah City. Their finding seems to confirm that the digital divide between different generations poses a great challenge in the implementation of e-government in the Kingdom. Although these studies refer specifically to the KSA, the same could be said of other GCC countries, such as Kuwait, where, according to numerous respondents we spoke to, the country's youth is far more internet-savvy than older citizens.[7]

The accessibility of online information and services constitutes another challenge facing the advancement of e-government in the GCC countries, and thus affecting adoption rates. As the term implies, web accessibility refers to the extent to which information and services are universally accessible to all possible types of users, including those with any impairments and/or non-native-speaking residents (Abanumy et al. 2005). An accessible website is thus one that is user-friendly in its design and caters to different demographics and needs. Government websites that fall short of meeting the target users' needs 'may pose virtual barriers that prevent information seekers from attaining their goals' (Becker 2004: 11). Literature on website design reveals that accessibility shapes citizens' experiences and attitudes towards the adoption of new technology (Kumar et al. 2007). In their analysis of e-government website accessibility in the KSA and Oman, Abanumy et al. (2005) concluded, for instance, that the government websites in these two GCC countries require considerable effort if they are to become fully accessible. This study reveals that the problem of inaccessible websites could be attributed to the lack of awareness by government agencies of the importance of accessibility. Two of Abanumy et al.'s recommendations are that governments in these two countries should increase management awareness of the importance of web accessibility, and that they should provide training for IT personnel on this matter (2005: 104). As will be demonstrated in the following sections, the absence of multiple-language websites for some public service ministries, and the lack of e-services synchronization between government agencies and the KGO portal, have made access to

[7] Authors' interviews with senior CAIT managers, CAIT headquarters, Kuwait City, 13 January 2011, and with senior ministry officials at the Ministry of Electricity and Water head office, Kuwait City, 11 January 2011.

information/services a daunting and time-consuming task for Kuwaiti citizens and foreign residents, with a potentially adverse effect on e-services usage rates.

3.2. Citizen attitudes and trust

Citizen attitudes towards online services have been identified as yet another palpable challenge to e-government adoption in the countries of the GCC. For e-government to develop and gain popularity among citizens, it requires users who are not only able (i.e. computer literate) but also *willing* to use e-services. According to Mayer, Davis and Schoorman (1995), citizens' negative attitudes towards using e-services are one of the major barriers to e-government adoption in GCC countries. These negative attitudes may, for instance, be born out of citizens' perceptions of overall inefficient government performance. Research does suggest, however, that citizens' increasing familiarity with the benefits of online government often helps to change these negative perceptions and increase adoption rates of the e-services offered (West 2004). It is interesting to note in this context that such negative attitudes do not seem to prevail amongst citizens and residents in Kuwait. Indeed, according to a recent study by AlAwadhi and Morris (2008), Kuwaitis appear overall positively inclined towards e-services; and this despite relatively low adoption rates.

Citizen trust in e-government has also been identified in the literature as one of the major challenging factors for the development of e-services in the GCC countries. By trust, we mean the ability of citizens/residents to use online services confidently and without fear of misuse of personal data (Tan et al. 2008). Gefen, Rose, Warkentin and Pavlou (2005) and Bélanger and Carter (2008) assert that lack of trust in the government has a big impact on the adoption of technology, including the internet. Indeed, the lack of trust may contribute to creating a section of the society that is reluctant to use e-government services and sceptical of them. In their study of e-government adoption in Jordan, AlOmari, Sandhu and Woods (2009) concluded that trust in government is a predictor of citizens' intention to use e-government services. Government agencies should therefore have in place 'trust-building strategies' that would encourage citizens to embrace e-government services, such as posting security and privacy seals. Government agencies could also use 'pamphlets and posters at their brick-and-mortar locations to emphasize the security and privacy mechanisms' (Bélanger and Carter 2008: 172). By assuring citizens that their private information is both secure and protected, governments could contribute significantly to increasing the widespread adoption of e-government provisions. Literature on e-government security shows that in many countries the main concern of citizens is a fear that their information could be misused, and their privacy

invaded (AlOmari et al. 2009). The provision of a secure e-government system is thus critical to the success of e-services provision (Bélanger and Carter 2008).

Although trust has been identified as a key challenge in GCC countries, the authors of this present paper felt that a broad survey of a large segment of the Kuwait society is required in order to explore the notion of trust, including security and privacy, something which is beyond the scope of the exploratory analysis at hand.

3.3. Change management issues

Reluctance to change workflow patterns within and across government agencies and resistance to innovation constitute yet another impediment to the successful implementation of e-government projects. Indeed, according to various studies in the field, the designers of e-government projects in the GCC and further afield grapple with a workforce that is often unwilling to embrace new technologies and changes in management structures, as well as an overall reluctance of government departments and agencies to share data and cooperate with one another in the re-engineering of online services for citizens and businesses. As Punia and Saxena put it, most government organizations tend to 'work as vertically rigid "silos" who get on with their jobs without any collaboration with other agencies involved with the other activities of the same process' (2004: 500).

Within the GCC context, several studies have problematized the issue of change management in the context of e-government development. In their analysis of e-government in Qatar, Al-Shafi and Weerakkody (2007), for instance, have identified change management issues as one of the major challenges facing e-services delivery in Qatar. Resistance within government agencies and amongst staff to change has impacted negatively on the development and implementation of e-government there. Similar findings have been reported in the case of Oman. Al-Busaidy and Weerakkody (2008) found a lack of cross-agency collaboration which seems to impact the provision of integrated e-services to citizens and businesses. Equally, in the Saudi context, Alharbi (2006), in a study of the obstacles to e-government implementation in the educational sector, found that educational, organizational and political factors, among them resistance to online services, represent the major challenges. Sahraoui et al. (2006) identified administrative barriers and lack of collaboration by some Saudi government agencies to be major obstacles to integrating different functions and services in a unified e-government project.

Lack of transparency could be said to be a major obstacle to the development of e-government in most GCC countries. The literature has shown an inextricable link between e-

government and transparency. A well-developed e-government system could help in increasing the transparency of decision-making processes, and offer citizens, businesses and stakeholders the opportunity to contribute actively to decision-making through online forums (Ndou 2004). Such a system, as our findings indicate, is rare or, in most cases, non-existent in Kuwait and other GCC countries, and this is for a host of reasons, some of which are to do with the immaturity of e-government services, while others are directly linked to the lack of a service culture in some of these countries. The lack of provision of integrated services at one contact point, which could impact citizens positively and provide them with easy and quick access to services, is a good example of the lack of a service culture in those contexts. The absence of a collective, multidisciplinary and dynamic service process can be attributed in large part to some government agencies' resistance to open and transparent systems as they seek to preserve their power and authority. As a result of such practices, employees are often marginalized and excluded from the decision-making process (Ndou 2004). In the Qatari context, for instance, Al-Shafi and Weerakkody (2007) have noted that some employees do not feel part of the organization to which they belong, as they are not actively and directly engaged in decision-making.

As will become apparent in the next section, reluctance to change and the prevalence of a 'silo mentality' across government agencies also appear to obstruct further advances in e-services delivery in Kuwait. Indeed, these factors explain in large measure the discrepancies that presently exist across government agencies in levels of e-services maturity, as well as the lack of full synchronization of e-services between ministry websites and the KGO portal.

3.4. Regulatory environment

The absence of an enabling legal framework that regulates the use of electronic data, deals with e-crimes and authenticates electronic signatures is one of the main challenges GCC countries face in advancing their e-services capabilities. Indeed, although Bahrain has successfully implemented an e-commerce law providing the legal foundation for e-transactions, most GCC countries have yet to put similar legislation in place (Al Amer 2003). The new e-commerce law in Bahrain recognizes digital signatures and other forms of electronic verification and identity authentication. In Oman, by contrast, no such legislation is in place, which, according to various studies (e.g. AlShihi 2005; Al-Busaidy and Weerakkody 2008), has significantly slowed down progress in implementing the country's e-government project. As will be demonstrated below, this is also the case in Kuwait, where key advances in

e-services delivery are impeded by the lack of the necessary legislation on e-transactions and e-crimes.

4. THE STATE OF E-GOVERNMENT SERVICES DELIVERY IN KUWAIT

Kuwait's drive towards the adoption of online government is just a little over a decade old. Having identified the development of e-government as one of its top priorities, in 2000 the Kuwaiti cabinet passed decree no. 759, which facilitated the establishment of a Higher National Committee to be headed by then prime minister and present emir Sheikh Sabah Al-Ahmad Al-Sabah. The committee, which also comprises the Ministry of Planning, representatives from all other government agencies and IT experts, has been tasked with the development of Kuwait's e-government vision and the supervision of its implementation (AlAwadhi and Morris 2008: 2).

Since then, the government has signed several memoranda of understanding (MOUs) with Singapore – one of the leading countries in e-government – in 2004, 2005 and 2008, and with the IT giant Microsoft in 2007, to advance its vision of transforming Kuwait into one of the leading knowledge-based societies in the world.[8] To drive this transformation forward in 2006 the Kuwaiti cabinet established CAIT, whose broad remit of responsibilities includes (1) the coordination of e-government projects between the Higher National Committee and individual government agencies, and between the latter; (2) involvement in all matters pertaining to IT budgets and the tender for and acquisition of IT infrastructure at all tiers of government; (3) the development and maintenance of an official e-government portal; and (4) the organization of professional training and public awareness campaigns for stakeholders and the broader Kuwaiti public.[9] Following its creation, CAIT was tasked with the creation of the central KGO portal, which went live in 2008 and seeks to provide a 'one-stop' centre for the

[8] Since 2004, the Kuwaiti authorities have cooperated closely with the Singaporean government through the latter's Infocomm Development Authority (IDA). According to the first MOU signed between the two countries in 2004, the IDA was to help Kuwait develop a 'blueprint' for e-government and establish CAIT, located in Kuwait City. The second MOU, which followed in 2005, facilitated further cooperation in the development of the KGO portal, whilst the latest MOU, that of 2008, sought to expand cooperation between the IDA and CAIT on matters pertaining to the advancement of e-government in Kuwait as well as to foster collaboration on technological and operational matters. See Kok (2008); see also AlAwadhi and Morris (2008: 1–2); Al-Rashidi (2010: 5).

[9] See Art. 2 of decree no. 233 in 2006 for the 'Establishment of the Central Agency for Information Technology', www.cait.gov.kw/Default.aspx?pageId=447, accessed 23 June 2011. Authors' interviews with senior CAIT managers.

provision of government information and services online, alongside the extant ministry websites.[10]

As of 2011, Kuwait has made significant strides in advancing its e-government project, as is evident in the country's rise on the UN global e-development index from rank 90 out of 183 listed countries in 2003 to the top 50 in 2010 (see Table 3 above). In addition to the KGO portal, there are currently over thirty active government agency websites, all providing a wealth of information and services to citizens, residents, businesses and foreign visitors. As in other parts of the GCC, this remarkable progress in e-government development, although far from complete, has been driven by a government intent on turning Kuwait into a leading information society, and facilitated by robust growth in ICT spending over the past decade (Kapur 2010) as well as by high literacy rates, and overall respectable computer literacy and internet usage rates, particularly among the younger generation of Kuwaitis (Internet World Stats *n.d.*, b). According to CAIT portal traffic figures, for instance, in the first two years of its existence alone site visits to the KGO portal by citizens/residents and businesses nearly doubled, from about 651,500 in 2009 to over 1.2 million in 2010, attesting to the prospects of this 'one-stop' centre becoming a key avenue of G2C and G2B online interaction (Central Agency for Information Technology 2010).

Disaggregating e-government into its component units, the following analysis provides a detailed account of the current state of e-services delivery in Kuwait and some of the challenges it faces. As mentioned in the introduction, particular attention is here given to levels of e-services maturity across government agencies, the degree of services synchronization extant between the KGO portal and ministry websites, and the relevance of the e-services provided. Neither composite measures, such as the UN e-development index, nor any of the extant studies on e-government in Kuwait have sufficiently addressed these issues, thus providing an incomplete picture of the state and challenges of e-services delivery in the country.

The subsequent pages will first examine the issue of 'language and communication', that is, the extent to which decision-makers have addressed Boujarwah's (2006) concern about the prevalence of Arabic-language-only websites amongst government agencies in Kuwait. As will be argued below, accessibility to e-services in Kuwait, as elsewhere in the GCC, hinges on the availability of web content in multiple languages. The paper then fleshes out in more

[10] According to the deputy director of CAIT there are no plans to shut down individual ministry websites, as this is not common practice elsewhere. Authors' interview with deputy director of CAIT, CAIT headquarters, 10 January 2011.

detail the current state of e-services delivery in Kuwait, highlighting both achievements and current challenges in advancing the quality and scope of the services provided.

4.1. Multilingual e-services provisions

As the term 'G2C' implies, e-services in this category of online government are designed to facilitate improved *citizen* 'access to and interaction with' government agencies. Yet in many cases this is only half the story. Indeed, in actual practice G2C initiatives are often geared towards a far broader demographic than the term 'citizen' suggests. Whilst a country's citizen body usually comprises the key target community of e-services provisions, that may also extend to non-native residents and other foreign nationals seeking information about, or having to deal with, a particular government or department for travel and/or business purposes. This raises the issue of what Jaeger and Thompson have termed 'language and communication', that is, the fact that many countries 'have more than one language spoken by the populace' (2003: 391). For e-government to be effective and accessible to the entire population (citizens and residents), it thus has to use a language, or set of languages, that is intelligible and facilitates easy communication for a vast majority, if not all, of the targeted e-services users.

Kuwait, like most other GCC countries, is a case in point, where the designers of e-government services, involving both G2C and G2B transactions and interactions, have to take the issue of 'language and communication' into account. According to 2010 census figures published by the Public Authority for Civil Communication, the country has a total resident population of 3.44 million, of which 1.1 million are Kuwaiti citizens and the remaining 2.34 million foreign nationals. A vast majority – 68 per cent – of the population is hence comprised of non-Kuwaiti residents, most of whom originate from countries outside the Arabic-speaking world. Clearly, this has implications for the manner in which e-services are being delivered online, with bilingual (Arabic and English) web pages becoming an essential means to facilitate user accessibility and a requisite for ensuring high adoption rates among the non-Arabic-speaking resident population.

As far as Kuwait is concerned, the days when government agencies had single-language-only websites are nearly over.[11] Indeed, as of 2011 most of the agency websites are available in both Arabic and English, and so is the KGO portal, which is being developed as a unified online space for the delivery of e-services to businesses, citizens and residents. As Table 5

[11] According to Boujarwah (2006: 347), as of 2006 most government agency websites were only available in Arabic.

below highlights, most of the key ministries with heavy public service responsibilities provide bilingual web pages, which contain a range of information and services for both Kuwaiti and non-Kuwaiti residents. The Ministry of Interior website, for instance, probably boasts the most extensive range of e-services in Kuwait to date, including several such services for non-Kuwaiti residents.[12] As of 2011, there are six ministries left – Commerce and Industry, Education, Defence, Foreign Affairs, Health, and Public Works – whose web presence is restricted to Arabic only,[13] despite the fact that their remit of responsibilities extends beyond the Arabic-speaking segment of the Kuwaiti population. Most of their e-services are provided in English, however, on the KGO portal.

4.2. Maturity and synchronization of e-services delivery

In Kuwait, as in many other countries across the globe, the development (re-engineering) and delivery of e-services are the exclusive remit of individual government agencies. Whilst CAIT is tasked with overseeing the development and maintenance of the KGO portal, and is critically involved in all matters pertaining to the development, budgeting and acquisition of the overall IT infrastructure for e-government, it has no control over the e-services strategies pursued by individual ministries and other agencies.[14] With each ministry left to its own devices, there is currently little in terms of a concerted e-services strategy in place, which would involve cross-agency planning, design and implementation of a uniform set of integrated services. Moreover, beyond 'gentle' encouragement, CAIT has no formal powers to push government agencies into re-engineering their services for citizens, residents and businesses into online services. Essentially, this means that the e-services offered to the public through the KGO portal are only ever as expansive in scope as the individual government agencies make them.[15]

[12] E-services available on the Ministry of Interior website for non-Kuwaiti residents include various residency-related services, such as applications for temporary residency and family visit visas.

[13] At the time of writing the English-language tab on both the Ministry of Health and the Ministry of Defence websites was not active.

[14] Authors' interview with senior CAIT managers. See also Al-Rashidi (2010: 2).

[15] Despite this lack of formal powers, CAIT management has emphasized to the authors that it very much considers the agency to be at the heart of Kuwait's e-government project, and a principle driver in further e-government advances. According to senior CAIT managers, the agency deploys various 'soft power' tactics to entice government agencies into re-engineering their public services and to drive the country forward towards connected/networked e-government. Examples include the drafting of an e-transactions bill, which was submitted to parliament some time ago, and which is deemed indispensable by CAIT to drive e-government development forward, as well as routine contacts between CAIT and the IT departments of individual government agencies in order to monitor the latter's e-projects and provide (if necessary unsolicited) advice on the possible re-engineering of agency services. Authors' interviews with senior CAIT managers.

Table 5. Web-based G2C e-services maturity by government ministry, 2010

Ministry	Web presence	One-way flow (6)	Two-way flow (4)	Payment transaction (6)	e-Democracy (4)	Total number of service categories
KGO portal	A/E	6	4	5	1	16
Interior	A/E	6	1	2	1	10
Public Works	A	4	2	1	2	9
Justice	A/E	4	1	3	0	8
Finance	A/E	5	1	2	0	8
Social Affairs and Labour	A/E	5	3	0	0	8
Communication	A/E	5	2	1	0	8
Oil	A/E	5	1	0	0	6
Awqaf and Related Affairs	A/E	4	2	0	0	6
Education	A	4	2	0	0	6
Higher Education	A/E	4	2	0	0	6
Health	A	5	1	0	0	6
Electricity and Water	A/E	2	2	1	0	5
Foreign Affairs	A	4	1	0	0	5
Office of the Prime Minister	A/E	4	1	0	0	5
Defence	A	3	1	0	0	4
Commerce and Industry	A	4	0	0	0	4
Information	Not available	0	0	0	0	0

Sources: Information taken from the following ministry websites, June 2011: www.e.gov.kw, www.moi.gov.kw; www.mof.gov.kw; www.moc.kw; www.mpw.gov.kw; www.mosal.gov.kw; www.moj.gov.kw; www.moh.go.kw; www.moo.gov.kw; www.mohe.edu.kw; www.moe.edu.kw; www.islam.gov.kw; www.mod.gov.kw; www.energy.gov.kw; www.pm.gov.kw; www.mofa.gov.kw; www.moci.gov.kw.

Notes: This table lists the number of service categories (see Table 2) available on the web pages of all Kuwaiti government ministries and the KGO portal for each of the four stages of e-service maturity identified by Chatfield and Alhujran (2009). The government ministries and KGO portal are ranked according to the total number of service categories provided on their individual websites. A = Arabic; E = English.

That a unified e-services strategy is lacking transpires from the vast discrepancies that currently exist in levels of e-services maturity across government agencies, the absence of any integrated e-services and, most problematically, a lack of e-services synchronization between government agencies and the KGO portal. As far as the first of these is concerned, Table 5 highlights the different levels of web-based e-services maturity presently found across government ministries in Kuwait. Whilst most ministry websites provide basic 'one-way information' flows from agency to the public, far fewer allow for 'two-way interaction' flows and very few facilitate 'payment transactions'. Indeed, the only ministries providing online transaction facilities on their agency websites are that of the Interior, which again provides the most advanced set of web-based e-services to citizens/residents, and those of Justice, Finance, Electricity and Water, Public Works, and Communication. The Ministry of Electricity and Water, for instance, enables users to pay their utility bills online, whilst the Ministry of

Interior provides for the online payment of various fines for violations (traffic and immigration). Whilst some of this variance in web-based e-services maturity can be explained by the fact that ministries differ in their level of interaction with citizens/residents, the fact remains that even key public service providers, such as the ministries of Electricity and Water, of Higher Education and of the Interior, differ markedly in the types and scope of e-services they offer their users (see Appendix). Overall it is thus difficult to discern any clear patterns in levels of e-services maturity across Kuwaiti government ministries, although it appears that the lead agencies in e-services delivery include those with strong public sector portfolios (Interior, Finance, Justice and Social Affairs), which is good news of course for the country's citizens and residents.

Table 5 furthermore reveals that across the board only two ministry websites and the KGO portal provide (rudimentary) e-democracy/e-participation tools, such as online surveys (KGO portal, Interior and Public Works) and blogging facilities (Public Works)**.** This lack of e-participation provisions is not considered uncommon, however, by the standards of the region, where governments are more renowned for *talking at* citizens than for the empowerment of citizens to participate in the decision-making process, be it offline or online.[16]

With government agencies in charge of the provision of e-services, the key reasons for these discrepancies in levels of e-services maturity must be located within the agencies themselves. Although further research on the matter is required, it appears that resistance to change, the lack of clearly defined responsibilities and lengthy interdepartmental chains of approval and involvement may all play a role in slowing down the process of re-engineering public services into electronic equivalents. A case in point is the Ministry of Electricity and Water, where, according to a senior civil servant, responsibilities for the development and delivery of e-services are not clearly defined and IT services are fragmented, which has led to serious delays in the introduction of e-billing provisions on the ministry website.[17]

Further differences in the level of e-services maturity transpire on closer inspection of the types of services provided online by individual government agencies. Two types of such services are currently available to the public in Kuwait: 'partial' and 'full' e-services. *Partial* e-services, whilst providing users with, for instance, information on application procedures

[16] According to the 2010 UN e-participation index, Kuwait ranks at number 53 out of 157 countries, followed by Oman (76), Qatar (joint 86), the UAE (joint 86) and the KSA (102). The only GCC country with a relatively high e-participation ranking is Bahrain, which might in part at least be explained by the introduction of e-voting in the 1999 referendum on a new national charter.

[17] Authors' interviews with senior Ministry of Electricity and Water officials.

and/or static forms,[18] still rely heavily on face-to-face contact between the user and one or more government agencies. *Full* e-services, meanwhile, enable users to conduct all the necessary steps to obtain a given agency service online, that is, from enquiry stage to service completion. These services can range from such basic tasks as status enquiries about licence and other applications to e-payment provisions for fees and fines and fully processed online licence/ID applications, just to name a few. It is clear, then, that as a category of e-services, full services are not only more user-friendly and efficient than partial ones, but also significantly closer to the benchmark of good practice in e-government service delivery.

Amongst the government agencies in Kuwait, as of 2011, vast discrepancies can be detected in the extent to which full e-services are being offered to citizens and residents online.[19] Ministry websites providing only partial e-services include key public services providers such as the ministries of Social Affairs and Labour, of Health and of Education. Other ministries, again, including those of the Interior, of Finance, of Justice, of Communication and of Electricity and Water, offer a range of full e-services on their websites, some of which include payment transactions,[20] in addition to numerous partial services. A sample breakdown of the type of services available on the websites of the ministries of Electricity and Water, of the Interior and of Higher Education is given in the Appendix, and highlights the discrepancies that presently exist among three important public service providers in both the breadth and types of e-services they provide to citizens/residents online.

It is worth noting in this context that all of the full e-services presently available online are 'in-house' services only; that is, they do not require the involvement of any other government agency. *Integrated* e-services, involving various government agencies, are thus as yet not available on any of the ministry websites or the KGO portal. This is problematic in so far as 'much of government work, especially government services, is carried out by multiple government agencies' (Punia and Saxena 2004: 500), meaning that without close cooperation between agencies, a significant number of key public services for citizens/residents will remain unavailable online. Typical examples of such integrated e-services include, but are not

[18] According to the CAIT definition of 'electronic forms', static forms are paper-based forms which are 'converted as-is into an electronic form[s] to be published online over the internet'. Static forms can either be filled in online, or printed and completed manually. They cannot, however, be submitted electronically, but must be submitted in person or by fax. See Central Agency for Information Technology (2009: 19).

[19] This fact was already remarked upon in a 2009 UN survey on e-government in Kuwait, but no detailed breakdown of levels of e-services maturity by government ministries was provided. See Economic and Social Commission for Western Asia (ESCWA), United Nations (2007).

[20] Examples include e-payment provisions for utility bills (Electricity and Water), traffic and immigration violations (Interior), phone bills (Communications), state property fees (Finance) and family expenses payment (Justice).

limited to, driving licence and passport applications as well as residence visa applications and extensions, all of which rest on close multiple agency cooperation and data sharing.

As far as can be established, there are several reasons why e-service delivery in Kuwait has as yet not progressed beyond the stage of 'two-way interaction' – that is, beyond the provision of 'partial/full' in-house e-services – towards the delivery of integrated e-services, including a broad range of payment transactions. One such reason has to do with the phased approach taken by CAIT to the introduction of the KGO portal. According to CAIT officials, the first phase of the KGO project (KGO 1), which saw the launch of the portal itself and the consolidation of extant government agency information and basic e-services into a single point of access for businesses and citizens/residents, has just been completed. As part of phase two (KGO 2), CAIT is presently working on advancing levels of e-services maturity on the KGO portal by introducing the IT infrastructure necessary for the provision of integrated services. As of mid-2011, the agency had completed its market research for the technical requirements for integration and submitted a request for purchase to implement a fully integrated environment in Kuwait. Once this IT infrastructure is in place, CAIT seeks to develop a limited number of fully integrated e-services in some key areas, hoping their success will create the necessary contagion effect to roll out a whole range of such services across government agencies. It is envisaged that this first set of fully integrated e-services will be made available to users by 2013.[21]

To realize this objective within the next two years, however, other, non-technical challenges will need to be addressed successfully. For instance, one key problem area highlighted by CAIT staff – and reiterated by ministry officials – concerns the extant regulatory environment, which renders difficult the provision of integrated e-services.[22] At present the legal framework for e-government in Kuwait remains sketchy at best, with key pieces of legislation, including an e-transactions and e-crimes law, not in place.[23] As one senior CAIT official explained:

> We know that Kuwait doesn't have the legislation, unfortunately, that governs e-service and e-participation, you know, like other countries. It is unfortunately, sadly. But I know that CAIT has played a big role in that. It has drafted a law, sent it to parliament, the

[21] Authors' interviews with senior CAIT managers.
[22] Authors' interviews with senior CAIT managers and with a Ministry of Interior official from the Information Systems Directorate, Ministry of Interior premises, 12 January 2011.
[23] In 1999 the Kuwaiti government passed an Intellectual Property Law, which includes digital property rights. A draft e-transactions law is currently under consideration, but has as of 2011 not been passed. There is no freedom of information law or separate cyber crime law in place. Authors' interview with deputy director of CAIT, CAIT headquarters, 10 January 2011.

> national assembly, regarding e-transactions, dealing with e-mailing, and e-payment as well. But unfortunately nothing has been happening regarding this, so if a portal is being hacked tomorrow we can't do anything.[24]

Passage of an e-transactions or e-communications law in particular is necessary, however, for the purpose of authorizing e-signatures and the legality of digital documents, as well as more broadly for the establishment of an e-identity. So long as this law is not passed (and it appears to have been in the pipeline for some time now), key government services requiring the submission and validation of documents and/or the provision of signatures will remain available to citizens/residents offline only.

These legal hurdles are compounded by the lack of cross-agency cooperation on e-services delivery and an overall reluctance by civil servants to change the way ministries interact with the public. According to several respondents we spoke to, government agencies have shown little enthusiasm for data sharing and other forms of cross-agency cooperation, all of which are necessary to re-engineer key government services successfully into integrated online services.[25] Reflecting on their recent experience of working with government agencies during phase one of the KGO portal project, CAIT officials in fact acknowledged that a key challenge:

> has to do with trying to convince the agencies of the importance. So … CAIT needs to do a great job in trying to convince [the agencies]. Still some agencies are not convinced. The participation of agencies, unfortunately, has not been as we hoped, OK. Still some people feel, you know, they are over protective regarding their data. Some people still don't understand the role of CAIT. So we need to do more seminars, more ads, and more political and diplomatic work in terms of going and visiting the various agencies, getting them onboard. I remember the stage KGO 1, the team faced lots of problems trying to get the various agencies to participate, as hoped or as expected.

It is interesting to note in this context that, to allay some of these concerns, and in a drive to push forward its e-government vision without requiring fundamental changes in the way government agencies work, CAIT has opted for a software solution for integration that does not require the establishment of a centralized databank, in which all services would be hosted in a central location. As a senior agency official explained to us:

> We had to study what is available on the market; we had to study what type of technology is actually proven technology that we can depend on, because there are so many different

[24] Authors' interviews with senior CAIT managers.
[25] Authors' interviews with senior CAIT managers, and authors' interview with Ministry of Interior official. These are also the sources for the following paragraphs.

> scenarios to do integration. I know in Korea, when the delegation came, they have done a centralised database. They created a centralised database or databank, whatever you want to call it, that has all the services hosted in one place. OK. Now that works for Korea but it doesn't work for Kuwait. Because here in Kuwait you have a similar situation to what you have in the UK, whereby each agency think that the data belongs to them, to the agency. They have the ownership of the data. And they are very sensitive when it comes to their data, their ownership. And so, what we came up with is a way to actually ease the concern, make it remotely without actually, without the need to embark on a major project whereby, you know, you get all these services in a centralised place.

Apart from these issues of inter-agency cooperation, the authors also came across some noticeable shortcomings in levels of e-services synchronization between individual ministry web pages and the KGO portal. According to documents published by CAIT in 2009, the agency aims to enhance 'the life of the Kuwaiti Citizens and Residents through its ambitious plans to connect the existing eServices provided by different agencies to the KGO' (Central Agency for Information Technology 2009: 5). As of late 2011, this vision has been mostly realized,[26] although some discrepancies still exist in the number and types of e-services provided on ministry websites and the portal. Cases in point concern, for instance, several of the e-services provided by the ministries of Finance and of Education, which are available on the KGO portal, yet not on the web pages of the parent ministries. In fact, none of the e-services ascribed to the Ministry of Education on the KGO portal are listed on the parent ministry website. Other such discrepancies can be found between the KGO portal and the Ministry of Interior website. Although all of the Ministry of Interior e-services have been linked to the portal, to date this linkage is incomplete, with several crucial services for Kuwaiti residents and citizens only being made available in English (see Appendix, Table A3).

Lastly, it appears that as of 2011 several of the partial e-services for citizens/residents made available through embedded linking on the KGO portal are not live, with many of the static (application) forms necessary for a given service not being uploaded onto the portal.[27]

[26] According to CAIT officials, most agency e-services are currently connected to the KGO portal through so-called 'embedded linking', with some being linked using the Web Services (WS) software system. Embedded linking is essentially an enhanced form of redirection of the actual e-service from the parent site to a new site, using a different style sheet. In the 2009 manual for KGO connected e-services, circulated to all government agencies, the uniform adoption of the WS system is expressed as the ultimate goal of CAIT, given that it is more efficient and 'ensures access to Web services are secured and monitored'. Authors' interviews with senior CAIT managers; Central Agency for Information Technology (2009: 2–90).

[27] When questioned on the matter, CAIT officials noted that in these cases the required forms had not been submitted to the agency by the ministry in question, which is why any forms not provided by ministries are marked as 'unattached'. Email correspondence with CAIT representative, 7 May 2011.

This applies to the partial e-services provided by key social services providers, such as the ministries of Education, Electricity and Water, and Social Affairs and Labour.[28]

4.3. Relevance of e-transaction services

One issue little addressed in the literature on e-government in general and in quantitative analyses of levels of e-services maturity in particular concerns the *relevance* of the actual services provided online. It may appear self-evident that government agencies re-engineer public services into e-services that, being of immediate benefit to a broad spectrum of society, attract public attention and thus people's propensity to deal with governments online. For the most part this is the case, of course, with online government providing users with a speedy and efficient way of obtaining a required service.

As the Kuwaiti experience seems to suggest, however, there are instances in which the relevance of a given e-service eludes the critical observer; and this even though on paper the service appears to make absolute sense. A case in point, observed by the authors, concerns the e-billing provisions recently made available on the Ministry of Electricity and Water website and the KGO portal. At face value, this service is user-friendly and efficient, providing a fast and easy route for citizens/residents to pay their water and electricity bills without any physical contact with the ministry itself. Upon closer inspection it becomes apparent, however, that this e-service is of questionable value to citizens/residents for two reasons. First, although the actual payment can be made online, the transaction can only take place once a citizen/resident has called in an engineer from the ministry to conduct the actual meter readings. Rather than their being organized by the agency itself, it is thus the responsibility of the citizen/resident to organize regular meter readings. Second, and crucially, it appears that the Kuwaiti authorities do not enforce utility bill payments in the country, which means that without the initial contact with the ministry, citizens/residents will not be charged for their water and electricity consumption. According to one high-ranking ministry official, this practice of non-enforcement has led to an annual shortfall in utility bill payments of around 1.9 billion Kuwaiti dinar.[29]

Whilst on paper this e-transaction service appears closer to the benchmark of best practice in online government, in actual practice it hence serves neither to render more

[28] At the time of writing, examples of e-services affected by the lack of downloadable forms included (1) transfers between schools (Ministry of Education), (2) transfers of electricity meters/cables (Ministry of Electricity and Water), (3) requests for medical reports (Ministry of Health) and (4) applications for a work permit (Ministry of Social Affairs and Labour). See the KGO portal, www.e.gov.kw, accessed 1 June 2011.

[29] Authors' interview with Ministry of Electricity and Water official, Ministry of Electricity and Water premises, 11 January 2011.

efficient the collection of utility payments nor to increase payment rates amongst Kuwaiti citizens/residents. In other words, this particular e-service fails to live up to the objectives of e-government. In the final analysis, this example highlights the need for more careful scrutiny of the value-added of online services in general and of their relevance to users within specific sociopolitical settings in particular.

5. CONCLUSION

This paper has surveyed the state of web-based e-government services delivery for citizens and residents in Kuwait. Disaggregating e-government to its component units, we have compared and contrasted the functionality and maturity of e-services provided on individual ministry websites and the KGO portal. Our research findings indicate that Kuwait has made significant strides in the development of e-government since 2006. As mentioned above, this is evident in the country's rise on the UN global e-development index from rank 90 out of 183 listed countries in 2003 to the top 50 in 2010. Such healthy progress is clearly discernible in the wealth of information and services provided on government agency websites and the KGO portal, most of which are now available to users in both Arabic and English. Our findings also reveal, however, that there are wide discrepancies in levels of e-service maturity across government agency websites. Whilst most ministry websites provide basic 'one-way information' flows from the agency to the public, far fewer allow for 'two-way interaction' flows and only a handful of ministries facilitate 'payment transactions'. Although significant strides have been made in the development of e-government since the launch of the KGO in 2008, key challenges still obstruct the delivery of user-friendly and customer-focused online services to citizens/residents. This, we have argued, is attributable in large measure to an incomplete synchronization of e-services between the KGO portal and individual ministry websites, the limited availability of full e-services across government agencies, and the absence of integrated e-services involving multiple agencies. Indeed, closer inspection of individual ministry websites indicates that progress in e-service delivery is hampered not by technological barriers or by human capacity problems, but rather by the apparent 'silo mentality' of some government agencies. The reluctance of some to change workflow patterns within and across government agencies remains one of the key challenges to establishing cross-agency collaboration and data sharing. Whilst these challenges will need to be addressed internally by individual government agencies, there are other challenges that require concerted government action, such as the passage of an enabling legal framework regulating the use of electronic data. This framework is as yet not in place. The authors believe that for CAIT to

achieve its objective of offering its first set of fully integrated services to its citizens by 2013, the Kuwaiti government will need to address as a matter of priority not only the issue of e-transaction and e-crime legislation, the lack of which constitutes a hindrance to the provision of integrated e-services, but also the creation of a culture of collaboration within and across government agencies.

REFERENCES

Abanumy, A., A. Al-Badi and P. Mayhew, 2005. E-Government Website Accessibility: In-Depth Evaluation of Saudi Arabia and Oman. *Electronic Journal of e-Government*, 3 (3), pp. 99–106.

Al Amer, M., 2003. Bahrain and the Information Society. Presented at the Western Asia Preparatory Conference for the World Summit on the Information Society (WSIS), Beirut, Lebanon, 4–6 February.

Al-Arabiya, 2010. Kuwaitis Worry about Demographic Imbalance. 21 July.

AlAwadhi, S. and A. Morris, 2008. The Use of the UTAUT Model in the Adoption of e-Government Services in Kuwait. *Proceedings of the 41st Hawaii International Conference on System Sciences*, pp. 1–11.

Al-Busaidy, M. and V. Weerakkody, 2008. Factors Influencing e-Government Implementation Process in Oman: A Discussion. Presented at the European and Mediterranean Conference on Information Systems, 24–6 May, Dubai, UAE.

Alharbi, S., 2006. Perception of the Faculty and Students toward the Obstacle of Implementing e-Government in Educational Institutions in Saudi Arabia. Unpublished dissertation, West Virginia University.

Al-Khouri, A. M. and J. Bal, 2006. Electronic Government in the GCC Countries. *International Journal of Social Sciences*, 1 (2), pp. 83–98.

Al-Kibsi, G., K. de Boer, M. Mourshed and N. P. Rea, 2001. Putting Citizens On-Line, Not In Line. *e McKinsey Quarterly*, 2, pp. 64–73.

AlOmari, M. K., K. Sandhu and P. Woods, 2009. E-Government Adoption in the Hashemite Kingdom of Jordan: Factors from Social Perspectives. www98.griffith.edu.au/xmlui/bitstream/handle/10072/30854/63024_1.pdf?sequence=1, accessed 12 December 2011.

Al-Rashidi, H., 2010. Examining Internal Challenges to E-Government Implementation from a System User Perspective.' Presented at the European and Mediterranean Conference on Information Systems, 12–13 April, Abu Dhabi, UAE.

Al-Shafi, S. and V. Weerakkody, 2007. Exploring e-Government in the State of Qatar: Benefits, Challenges and Complexities. Presented at the European and Mediterranean Conference on Information Systems, 24–6 June, Valencia, Spain.

AlShihi, H., 2005. E-Government Development and Adoption Dilemma: Oman Case Study, Presented at the 6th International We-B (Working for e-Business) Conference, Victoria University, Melbourne, Australia.

Al-Sobhi, F., M. Kamal and V. Weerakkody, 2009. Current State of e-Services in Saudi Arabia: The Case of Intermediaries in Facilitating Government Services in Madinah City. Presented at the European and Mediterranean Conference on Information Systems, 13–14 July, Izmir, Turkey.

Awan, M., 2003. E-Government: Assessment of GCC (Gulf Cooperation Council) Countries and Services Provided. *Electronic Government*, 2739, pp. 500–3.

Baum, C. and A. Di Maio, 2000. Gartner's Four Phases of E-Government Model. www.gartner3.gartnerweb.com/public/static/hotc/00094235.html, accessed 4 August 2011.

Becker, S. A., 2004. E-Government Visual Accessibility for Older Adult Users. *Social Science Computer Review*, 22, pp. 11–23.

Bélanger, F. and L. Carter, 2008. Trust and Risk in e-Government Adoption. *Journal of Strategic Information Systems*, 17, pp. 165–76.

Boujarwah, A., 2006. E-Government in Kuwait: From Vision to Reality. *iiWAS 2006*, pp. 341–50.

Central Agency for Information Technology, 2009. KGO Connected eServices Standards DOCUMENT & SDK. CAIT Publication. www.cait.gov.kw/Images/CAIT-KGO-Connected-eServices_15-10-2009-V1.3.pdf, accessed 23 June 2011.

Central Agency for Information Technology, 2010. *KGO Portal Annual Traffic Report 2010*. Report obtained from CAIT managers 11 January 2011

Chatfield, A. T. and O. Alhujran, 2009. A Cross-Country Comparative Analysis of e-Government Service Delivery among Arab Countries. *Information Technology for Development*, 15 (3), pp. 151–79.

Economic and Social Commission for Western Asia (ESCWA), United Nations, 2007. National Profile of the Information Society in Kuwait. ESCWA Publication. http://isper.escwa.un.org/LinkClick.aspx?fileticket=HVgN0BvvoIs%3D&tabid=219&language=en-US, accessed i June 2011.

Gefen, D., G. Rose, M. Warkentin and P. Pavlou, 2005. Cultural Diversity and Trust in IT Adoption: A Comparison of USA and South African e-Voters. *Journal of Global Information Management*, 13 (1), pp. 54–78.

Hamner, M. and F. Al-Qahtani, 2009. Enhancing the Case for Electronic Government in Developing Nations: A People-Centric Study Focused in Saudi Arabia. *Government Information Quarterly*, 26, 137–43.

Hiller, J. S. and F. Bélanger, 2001. Privacy Strategies for Electronic Government. Arlington, VA: PricewaterhouseCoopers Endowment for the Business of Government.

Internet World Stats, *n.d.*, a. Kuwait Internet Usage and Telecommunications. www.internetworldstats.com/me/kw.htm, accessed 21 October 2011.

Internet World Stats, *n.d.*,b. Middle East Internet Usage and Population Statistics 2010. www.internetworldstats.com/stats5.htm, accessed 20 June 2011.

Jaeger, P. T. and K. M. Thompson, 2003. E-Government around the World: Lessons, Challenges, and Future Directions. *Government Information Quarterly*, 20, pp. 389–94.

Kapur, S., 2010. GCC ICT Spend to See Robust Growth in Next Three Years. *Emirates 24/7 Daily Newsletter*, 1 February. www.emirates247.com/2.273/uae-economy/gcc-ict-spend-to-see-robust-growth-in-next-three-years-2010-02-01-1.4173, accessed 20 June 2011.

Kok, A., 2008. Singapore and Kuwait Strengthen e-Government Cooperation. *Asia Pacific Future Gov*, 7 November. www.futuregov.asia/articles/2008/nov/07/singapore-and-kuwait-strengthen-egov-cooperation, accessed 23 October 2011.

Kostopoulos, G., 2004. E-Government in the Arabian Gulf: A Vision towards Reality. *Electronic Government*, 1 (3), pp. 539–50.

Kumar, V., B. Mukerji, I. Butt and A. Persau, 2007. Factors for Successful e-Government Adoption: A Conceptual Framework. *Electronic Journal of e-Government*, 5 (1), pp. 63–76.

Layne, K. and J. Lee, 2001. Developing Fully Functional e-Government: A Four Stage Model. *Government Information Quarterly*, 18, pp. 122–36.

Mayer, R. C., J. H. Davis and F. D. Schoorman, 1995. An Integrative Model of Organizational Trust. *Academy of Management Review*, 20 (3), pp. 709–34.

Moon, M. J., 2002. The Evolution of E-government among Municipalities: Rhetoric or Reality? *Public Administration Review*, 62 (4), pp. 424–33,.

Murphy, E., 2006. Agency and Space: The Political Impact of Information Technologies in the Gulf Arab States. *Third World Quarterly*, 27 (6), pp. 1059–83.

Naseeb, A. A., B. S. al-Shemaly and C. H. Naseeb, 2008. E-Government Comparison between Kuwait and Bahrain. http://nguyendangbinh.org/Proceedings/IPCV08/Papers/EEE3706.pdf, accessed 28 October 2011.

Ndou, V., 2004. E-Government for Developing Countries: Opportunities and Challenges. *Electronic Journal on Information Systems in Developing Countries*, 18 (1), pp.1–24.
Pons, A., 2004. E-Government for Arab Countries. *Journal of Global Information Technology Management*, 7 (1), pp. 30–6.
Punia, D. K. and K. B. C. Saxena, 2004. Managing Inter-Organisational Workflows in eGovernment Services. Presented at the 6th International Conference on Electronic Commerce, 25–7 October, Delft, Netherlands.
Qatar e-Government, 2006. E.government Portal. www.e.gov.qa/eGovPortal/aboutus.jsp, accessed 19 July 2011.
Relyea, H. C., 2002. E-Government: Introduction and Overview. *Government Information Quarterly*, 19 (1), pp. 9–35.
Siau, K. and Y. Long, 2005. Synthesizing e-Government Stage Models: A Meta-Synthesis Based on a Meta-Ethnography Approach. *Industrial Management and Data Systems*, 105 (4), pp. 443–58.
Silcock, R., 2001. What is e-Government? *Parliamentary Affairs*, 54, pp. 88–101.
Sahraoui, S., 2005. E-Government in the Arabian Gulf: Government Transformation vs. Government Automation. Presented at the e-Government Workshop ’05, 13 September, Brunel University, West London, England.
Sahraoui, S., G. Gharaibeh and A. Al-Jbouri, 2006. E-Government in Saudi Arabia: Can it Overcome its Challenges? Presented at the e-Government Workshop ’06, 11 September, Brunel University, West London, England.
Tan, C., I. Benbasat and R. Cenfetelli, 2008. Building Citizen Trust towards e-Government Services: Do High Quality Websites Matter? *Proceedings of the 41st Hawaii International Conference on System Sciences*, 217.
United Nations, 2003. *UN Global e-Government Survey 2003*. New York: UN Publishing Section.
United Nations, 2005. *Global e-Government Readiness Report 2005: From e-Government to e-Inclusion.* New York: UN Publishing Section.
United Nations, 2006. *An Overview of E-Participation Models*. New York: UN Publishing Section.
United Nations, 2008. *UN e-Government Survey 2008: From e-Government to Connected Governance*. New York: UN Publishing Section.
United Nations, 2010. *United Nations e-Government Survey 2010: Levering e-Government at a Time of Financial and Economic Crisis*. New York: UN Publishing Section.
US Congress, Office of Technology, 1984. *Computerized Manufacturing Automation: Employment, Education, and the Workplace.* OTACIT-235, April. Washington, DC: US Congress, Office of Technology Assessment.
Weber, S., 2009. E-Learning in the Gulf Cooperation Council Countries (GCC): Problems and Prospects, in V. Uskov (ed.), *Web Based Education (WBE2009)*. Calgary: IASTED.
West, D., 2004. E-Government and the Transformation of Service Delivery and Citizens Attitudes. *Public Administration Review*, 64 (1), pp. 15–27.
Zaied, A. N. H., F. A. Khairalla and W. Al-Rashid, 2007. Assessing e-Readiness in the Arab Countries: Perceptions towards ICT Environment in Public Organisations in the State of Kuwait. *Electronic Journal of e-Government*, 5 (1), pp 77–86.

APPENDIX: E-SERVICES PROVISIONS BY SELECT MINISTRIES

Table A1. Ministry of Electricity and Water e-services

Ministry of Electricity and Water e-services	Ministry/KGO portal
Electricity and water bills enquiry and payment	PP
Exchanging electricity meter	PS
Replacement of electricity meter	PS
Payment of service fees	PS
New connections for portable water mains	PS
Industrial water mains connections	PS
Transferring electric meter or cable	PS
Voice prompts (electricity bill inquiry via interactive voice response system (VIR)	PS

Source: Kuwait Government Online portal, www.e.gov.kw; Ministry of Electricity and Water website, www.mew.gov.kw; both accessed 23 June 2011.

Notes: PP = password protected e-service; PS = partial e-services.

Table A2. Ministry of Higher Education e-services

Ministry of Higher Education e-services	Ministry/KGO portal
e-Search engine of accredited universities	FS
Current scholarship plan	PS
Scholarship plan result	PP
Outstanding students	FS
Transactional services of the Certification Equivalence Department	PP
Registration and scholarship plan scheduling service	PS
Applying to join the Higher Institute for Dramatic Arts	PS
Joining a section at the Higher Institute for Musical Arts	PS

Source: Kuwait Government Online portal, www.e.gov.kw; Ministry of Higher Education website, www.mohe.kw; both accessed 23 June 2011.

Notes: FS = full e-services; PP = password protected e-services; PS = partial e-services.

Table A3. Ministry of Interior synchronization e-services

Ministry of Interior e-services	Ministry/KGO portal
Violations payment (traffic/immigration)	FS
Passport status enquiries	FS
Sponsorship enquiries	FS
End of residency period enquiries	FS
Traffic violations enquiries	FS
Driving licence status enquiries	FS
Traffic violations for vehicles enquiries	FS
Vehicle record status enquires	FS
Issuing a learner's private driving licence	PS
Issuing a learner's public driving licence	PS
Renewing learner's licence for Kuwaiti citizens/foreigners	PS
Applying for theoretical/practical driving licence test	PS
Issuing a private driving licence	PS
Issuing a public driving licence	PS
Renewing a driving licence	PS
Licence replacement	PS
Modification and replacement of lost driving licence	PS
Transferring vehicle ownership	PS
Renewing a vehicle licence	PS
Renewing a vehicle licence (periodic checks)	PS
Cancelling a vehicle registration	PS
Exporting a vehicle	PS
Scrapping a vehicle	PS
Family visit visa	PS
Entrance visa for employment in government/civil sector	PS
Return visa for GCC citizens	PS
Temporary residence	PS
Issuing passport	PS
Passport renewal	PS
First time residency permit for civil sector employees	PS
Renewal of residency permit for civil sector employees	PS
Residence transfer	PS
Issuing nationality certificate	PS
Issuing replacement nationality certificate	PS
Application for Kuwaiti nationality	PS
Government visit visa	PS[a]
Entrance visa to work in government sector	PS[a]
Business visit visa	PS[a]
Entrance visa to work in civil sector	PS[a]
Renewal of vehicle licence for business sector employees	PS
Renewal of vehicle licence for diplomatic sector employees	PS
New licence for imported vehicles	PS
New licence for imported vehicles (diplomats)	PS
Exporting a vehicle (diplomatic authorities)	PS
Adding Kuwaiti wife to husband's file	PS
Adding newborn babies to father's file	PS[a]

Source: Kuwait Government Online portal, www.e.gov.kw; Ministry of Interior website, www.moi.gov.kw; both accessed 23 June 2011.

Notes: [a] These services are only available in English on the KGO portal. FS = full e-services; PS = partial e-services.

Published Kuwait Programme research papers

Contemporary socio-political Issues of the Arab Gulf Moment
Abdulkhaleq Abdulla, Emirates University, UAE

Sovereign wealth funds in the Gulf – an assessment
Gawdat Bahgat, National Defense University, USA

Labour immigration and labour markets in the GCC countries: National patterns and trends
Martin Baldwin-Edwards, Panteion University, Athens

Gulf state assistance to conflict-affected environments
Sultan Barakat and Steven A Zyck, University of York

Monarchy, migration and hegemony in the Arabian Peninsula
John Chalcraft, Department of Government, LSE

Social stratification in the Gulf Cooperation Council states
Nora Colton, University of East London

The Islamic Republic of Iran and the GCC states: Revolution to realpolitik?
Stephanie Cronin, University of Oxford and Nur Masalha, St Mary;s University College

Persian Gulf – Pacific Asia linkages in the 21st century: A marriage of convenience?
Christopher Davidson, School of Government, Durham Univeristy

Anatomy of an oil-based welfare state: Rent distribution in Kuwait
Laura El-Katiri, Bassam Fattouh and Paul Segal, Oxford Institute for Energy Studies

Energy and sustainability policies in the GCC
Steffen Hertog, Durham University and Giacomo Luciani, Gulf Research Center, Geneva

Volatility, diversification and development in the Gulf Cooperation Council countries
Miklos Koren, Princeton University and Silvana Tenreyro, LSE

Gender and participation in the Arab Gulf
Wanda Krause, Department of Politics & International Studies, SOAS

Challenges for research on resource-rich economies
Guy Michaels, Department of Economics, LSE

Nationalism in the Gulf states
Neil Partrick, Freelance Middle East consultant

The GCC: Gulf state integration or leadership cooperation?
Neil Partrick, Freelance Middle East consultant

How to spend it: Resource wealth and the distribution of resource rents
Paul Segal, Oxford Institute of Energy Studies

Governing markets in the Gulf states
Mark Thatcher, Department of Government, LSE

Gulf security: Changing internal and external dynamics
Kristian Ulrichsen, Kuwait Programme, LSE

The development of Islamic finance in the GCC
Rodney Wilson, School of Government, Durham University

Forthcoming Kuwait Programme research papers

Qatar's role in ending conflict and building peace
Sultan Barakat, University of York

The private sector and reform in the GCC
Steffen Hertog, Department of Government, LSE

Economic diversification in the GCC countries – past record and future trends
Martin Hvidt, University of Southern Denmark

Constructing a viable EU-GCC partnership
Christian Koch, Gulf Research Center, UAE

Secularism in an Islamic state: The case of Saudi Arabia
Stephane Lacroix, Sciences Po, France

The dynamics of formal and informal political participation/engagement in the Gulf
J.E. Peterson, University of Arizona, USA

Basra, Southern Iraq and the Gulf: Challenges and connections
Kristian Ulrichsen, Kuwait Programme, LSE

Financial market development in the GCC and the impact of the global financial crisis
Michael Webb, former Managing Director, Qatar Financial Centre Regulatory Authority

Dr Hendrik Kraetzschmar is Lecturer in Middle East politics in the School of Modern Languages and Cultures at the University of Leeds. He has published articles on the electoral and party politics in the Middle East and North Africa and is the co-editor of *Democracy and Violence: Global Challenges and Local Debates* (Routledge, 2010). His latest edited volume *Opposition Cooperation in the Arab World: Contentious Politics in Times of Change* will be published in 2012 (Routledge).

Dr El Mustapha Lahlali lectures in Arabic Language and Media in the School of Modern Languages and Cultures at the University of Leeds. He has published books and articles in the field of teaching Arabic, translation, and media. He is the author of *Critical Discourse Analysis and Classroom Discursive Practices* (Lincom Europa, 2007), *Advanced Media Arabic* (Edinburgh University Press, 2008), *How to Write in Arabic* (Edinburgh University Press, 2009), *Contemporary Arab Broadcast Media* (Edinburgh University Press, 2011), and co-author of *Ibn al-Tayyib: the Forgotten Journey of an 18 Century Arab Traveller* (I.B. Tauris, 2010).

This research paper was written under the auspices of the Kuwait Programme on Development, Governance and Globalisation in the Gulf States at the London School of Economics and Political Science with the support of the Kuwait Foundation for the Advancement of Sciences.