

DRAFT PAPER

**EVALUATION OF E-GOVERNMENT IMPLEMENTATION IN
COUNTRIES OF THE ARAB LEAGUE: IMPACT ON
DEVELOPMENT**

Satya P. Chattopadhyay, Ph.D

University of Scranton
Kania School of Management
Scranton, PA 18510, USA
E-mail: spc354@scranton.edu

ABSTRACT

This paper looks at the evolving concept of E-Government as an extension of the concept of Customer Relationship Management (CRM) to the public sector. The Arab world is now exerting an enormous amount of leverage in the global economy. Social, Political and economic forces in play pose immense challenges for governance in the region. The role of internet technology in improving the quality and effectiveness of government-citizen interaction is examined. An overview of the penetration of E-Government in the Arab World is provided. Using syndicated data (from World Bank and private research provider) the relationship between E-government penetration and development indicators is investigated.

**Keywords: E-Government, Customer Relationship Management (CRM),
Information and Communication Technology (ICT), Digital Divide**

Introduction: “The biggest decisions about the internet’s future will be political and social, not technological,” says The Economist in its recent survey of the internet society (Jan 25, 2003). It does not seek to minimize the phenomenal pace of developing technology, rather it highlights the dilemmas of society trying to keep pace and cope with such evolving technology. The same source indicates that from a standing start in 1995, the number of people with access to the “world wide web” has reached above 1 billion. This rapid penetration of the web has quickly morphed the nature and scope of interpersonal relationships of the connected, and forced a strategic shift in how organizational units of any size seek to communicate with its constituents.

The private sector has stepped up to the plate and moved to incorporate this newfound connectivity in the networked world into its strategies to enhance the value delivered to customers, internal and external. The CRM (Customer Relationship Management) strategies have become very popular with corporations all over the world. However, the landscapes of public sector operations have been slow to transform. The expectations of open access to government information, increased public engagement in government affairs, informed citizens and increased turnouts at polls fostering flourishing democracies have not come to pass. It is of interest to examine the nature and scope of public sector implementations of internet based strategies.

E-Government Definition Forsythe [1] defines E-Government as “the strategy of exploiting the power of information and communication technology (ICT) to transform accessibility, quality and cost effectiveness of public services to revitalize the

relationships between citizens and the public bodies that work on their behalf.” This conceptualization compares very well with the commonly accepted notion that CRM is a systematic corporate approach to the use of a strategically defined set of business processes that enhance the scope and quality of acquiring, servicing and retaining customers. E-government, in the definition used, focuses on the available internet technology as the driver for re-engineered processes for monitoring, maintaining and enhancing satisfaction among the electoral constituents with a goal of retaining legislative and executive control through subsequent electoral cycles. The obvious similarity in process and outcome components of both definitions, clearly reflect the underlying communality of the two constructs. However, the difference is also significant. E-Government proponents will benefit from what the private sector has learnt through a process of costly trial and error, that technology is an enabler of strategies rather than a strategy in itself.

E-Government Goals As nations become aware of the competitive marketplace for the mind, heart and pocketbook of increasingly global they seek more efficient means of gaining a differential edge that allows them to assume the mantle of leadership in the community of nations. The goals of E-Government can be summarized as follows:

a. Improved electoral perception. The legislative and executive arms of the government want to be perceived in a positive light wherever possible. The effectiveness of web-enabled strategies is expected to positively impact the public perception of government perception.

b. Responsiveness to public. The capabilities of web-enabled communication strategies are expected to significantly reduce the time for public concerns to be delivered to the relevant government entities, and formulation and implementation of resulting corrective action.

c. Higher delivered service quality through increased efficiency. The use of web enabled relationship management strategies allow for increasing levels of delivered service to constituents without corresponding changes in infrastructure investment levels.

d. Improved decision making. By making available timely and easily accessed information, the quality of decisions made by personnel in public sector will be of better quality.

e. Increased satisfaction and morale of employees. As the technology enabled relationship management strategies empower the government personnel to respond more quickly and effectively to concerned citizens, it is a boost to satisfaction and increased morale on their own part.

f. Institutionalize business knowledge. As political appointees rotate through the government bureaucracy, it is of considerable benefit to retain their expertise in a validated knowledge base that can be easily accessed by the replacements, thereby reducing the considerable period of time that is often needed to get up to speed.

g. Reliable and valid information available on demand. The ability to collect, store and make available information for flexible queries in real time is greatly enhanced by implementing internet technology based solutions.

Comparison of E-Government and Private Sector CRM

The Giga Information Group's Bartels [2] finds that government agencies lag significantly behind their private sector counterparts in implementation of web-enabled relationship management strategies. In his formulation, E-Government is primarily in the e-information and e-commerce stage, whereas the leaders in the private sector have advanced into implementations of e-reengineering and seeking the goal of e-collaboration. Primary reason for the difference is the inability of e-government projects to be integrated into mainstream strategies. Their pre-occupation with finding suitable niches to introduce the web-based technology has resulted in their inability to realize significant benefits in the form of better services at lower costs. Other significant areas of difference that contribute are:

- a. The different goals and objectives Profit is not a goal of E-Government. While efficiency is a goal, it often is a lower priority than delivery of the services to the citizens.
- b. Management policies While it is quite common in the private sector to segment customers based on their potential profitability or other outcome oriented characteristics, government is expected to treat all citizens equally, for the most part.
- c. Competitive environment E-Government customers, the citizens, do have the ability to change the complexion of the government, but only at discrete intervals. The private sector competition is much more dynamic, and customers can switch with the next transaction, but can also switch back momentarily.

- d. Relationship with customers The dynamic between organization and customer is different, as the organization is legally as well as morally answerable to the citizen-customer.

Special Considerations for E-Government Implementation

The expectations of flourishing democracy, increased civic engagement and informed citizenry have not been easily achieved due to inherent tradeoffs that have been difficult to work out [3]. The issues have been:

- a. Privacy concerns In order to provide unique targeted service to citizens, the system needs to have access to detailed information. Such a scenario raises the specter of an “Orwellian Big Brother” that is unpalatable to most constituents. The privacy issue remains an important parameter that moderates implementation of E-government.
- b. Digital Divide While the number of internet users is increasing exponentially, the access to the medium, and sophistication in ability to exploit such access in a beneficial manner is still quite spotty. As such, the so called “digital divide” has the potential of creating a distinction between the ‘haves’ and the ‘have-nots.’
- c. Support for enhancement and upgrades The change of guard in terms of political ideology, administrative priorities and leadership personalities make it difficult to provide the resource support for needed upgrades and enhancements to E-Government infrastructure. Missing that consistent commitment, it becomes difficult if not impossible to realize the projected gains of E-government.

In the next section, the E-Government initiatives of the US Federal Govt. are described and some performance issues are examined.

Evaluation of E-Government Implementation in Arab World : Impact on Economic and Human Development

The Federal Government has plans to invest approximately 500 million in the next couple of years to implement E-Government initiatives in various departments and agencies under its control [4]. It is interesting to note that this amount translates into only 3% of the projected spending on CRM nationwide, even as, with 281 million+ “customers,” is the organization with the single largest customer base [5]. A Pathfinders (2002) study [6] identified the following typology of E-Government implementation in Figure 1. The Pew Internet and American Life (2001) study [7] also found that the primary online interactions that US citizens have with government entities relate to information gathering as shown in Figure 2. Only a small proportion of the respondents reported using online resources to conduct transactions.

Empirical Analysis Completed: Taylor Nelson Sofres (TNS) researchers (Mellor, Parr and Hood, 2001) conducted benchmarking research study “Government Online: An International Perspective. [8]” The study examined the impact of the internet on governments at different levels. The publicly reported results from the TNS research, publicly reported data from Economist.com/Markets on Economic and Financial Indicators and data from the World Development Database provided by the World Bank on CD (2003) [9] were examined to test for correlations between E-government implementation dimensions and macroeconomic indicators. Figure 3 shows the significant correlations among the data. It is to be noted that for the present study, only publicly available data from TNS and The Economist [10] was used. Chattopadhyay and

Prattipati [11] reported significant correlations between E-Government implementation and five indicators (GDP, income distribution, economic and political stability, and internet usage).

Empirical Analysis Still To Be Completed:

- 1. The Arab Region Countries listed in Table 4 will be the focus of the empirical investigation.**
- 2. The countries in Table 4 will be classified into the E-Government implementation levels in Figure 1.**
- 3. Data from Arab countries will be compared across the countries in the group as well as with other country groups identified in the global arena.**
- 4. The data for Arab countries will be explored for implications for future policy-making and research.**

Potential Implications of Empirical Findings: It is hypothesized that if data is looked at among more homogeneous groups, significant relationships between E-Government implementation and development indicators can be unearthed. The results can lay the basis for future studies to be designed to test causal hypotheses regarding E-Government implementation and economic indicators. Such findings will for sure impact on the rate of adoption of E-Government applications across the globe.

Potential Implications for Practice: With the correlation of E-Government implementations with macro-economic indicators, there should be a positive incentive for evolving governments in the Arab region to move to this more accessible means of communicating with and serving its citizens. Governments of these countries will find useful guidelines to bridging the “digital divide” not only among nations, but also within the nation among different segments of the citizenry. Given the CRM emphasis on the need to monitor changes in customer needs, wants and expectations, E-Government implementers will need to put in place mechanisms for continuous monitoring of citizen environment in order to serve their need efficiently and effectively. Finally, since

technology is a prime enabler of E-Government implementation, there must be a willingness and commitment on the part of implementers to plan for the investments in technology and periodic upgrades. The knowledge gained by comparing E-Government implementations to CRM practices, will help benchmark implementation strategies on a global basis.

References:

- [1] Forsyth, Richard, "CRM Opportunity in E-Government" in www.Cym-forum.org , 6 August 2002.
- [2] Bartels, Andrew, "E-Government in 2002: Initiatives for Transforming Public Service Using Internet Technologies," 14 June 2002, Giga Information Group.
- [3] Lahey, Lima, "Government Barriers Hinder CRM Adoption", Computer Dealer News 28, December 2001, pp.16-17
- [4] Mckenna, Edward, "Over 281 Million Served", *Federal Computer Week*, 14 May 2001, pp. 32-34.
- [5] "Fed CRM Spending Up", *Federal Computer Week*, 17 June 2002: 41
- [6] Pathfinders, IMPOWER. "A guide to implement CRM in local Government-Learning from pathfinder program: Approach & Methodology." 2002
- [7] Source: Pew Internet and American Life Project: Government Web Site Survey, Sept. 5-27, 2001
- [8] Taylor Nelson Sofres study: "Government Online a benchmarking Study," in www.tnsoures.com/gostudy2002/download/J20244_GlobalSummary_revised.pdf, 18 June, 2003.
- [9] World Bank Development Indicators (Data CD 2003, World Bank Publications, Washington DC, USA)
- [10] Emerging Market Indicator Data from The Economist, in www.economist.com
- [11] Chattopadhyay, Satya P. and S. Prattipati, "E-Governments: Utilizing Customer Relationship Management (CRM) Platforms to Serve Citizens," Presentation at Asia Pacific Decision Sciences Institute International Conference, Shanghai, P R China, July 4-7, 2003.

Figure 1 Levels of E-Government Implementation

Implementation Level	Strategic Goals	Operational Adjustments
Level 1	Improving accessibility of services	<ol style="list-style-type: none"> 1. Multi-channel access and contact management. 2. Simple e-enabled processes such as electronic forms.
Level 2	Transforming a department based organization into a citizen centric one	<ol style="list-style-type: none"> 1. Unified view of the citizen customer.
Level 3	Configuring and delivering innovations in service provision	<ol style="list-style-type: none"> 1. Using citizen data to anticipate service needs and deliver tailored service. 2. Process integration and enablement: Design and operationalization of complex workflows to support innovative policies for serving citizens.

Figure 2 Citizen Interactions with Government on-line (% of respondents use)

Get tourism related information	77
Do research for work or school	70
Find out what services a government agency provides	63
Seek information about public policy or an issue of interest	62
Get Information or direction about health or safety issue	49
Get Information about business opportunities	34
Get information related to voting and location of polling place	22
Get information on candidates and issues in an election	21
Get information about lottery	21
File taxes	16
Renew automobile license and registration	12
Renew professional practice license	7
Obtain hunting/fishing permits	4
Pay minor fines	2

Figure 3 Significant Correlation between Government On-Line Usage and Economic Indicators (at alpha=.05)

Economic Indicator	Govt. On Line Usage
WB Indicators:	
Population Millions 2001	
Population Average annual % growth 1990-2001	
Pop. density people per sq. km 2001	
GDP per capita % growth 2000-2001	*** (+)
Life expectancy at birth Years 2000	
Adult illiteracy rate % of 15+ 2000	
% share of income of Lowest 10%	*** (-)
% share of income of Highest 10%	*** (-)
Value added as % of GDP Agriculture 2001	
Value added as % of GDP Industry 2001	
Value added as % of GDP Services 2001	
High-tech exports % of manufactured exports 2000	
Economist Indicators:	
Economic Performance vs. Potential (gap as %GDP)	
Economic and Political Stability (100 point scale)	*** (+)
Economic Freedom Index	
Taylor Nelson Sofres Variables:	
Population Internet Usage	*** (+)
Perception of Safety with Government On-line	

Table 4. List of Arab Countries Included in Further Empirical Analysis

Algeria	Bahrain	Comoros	Djibouti	Egypt
Iraq	Jordan	Kuwait	Lebanon	Libya
Mauritania	Morocco	Oman	Qatar	Saudi Arabia
Somalia	Sudan	Syria	Tunisia	UAE
Yemen				