

SWOT and TOWS matrix e-Government analysis review on Sultanate of Oman

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Doi:10.5296/ijld.v5i4.8641 URL: <http://dx.doi.org/10.5296/ijld.v5i4.8641>

Abstract

Every government is seeking to provide the best services to its country to achieve efficiency and accepted performance. This goal could be achieved by improving the service performance of the entire sectors in society. Billions of dollars was invested by governments in order to undertake their first step towards implementing the e-Government project and specially implementing the best methodology of all attached and correlated electronic-based services to it. Government of Sultanate of Oman has realized the importance of moving towards the information century. Therefore, this paper aims to conduct SWOT and TOWS matrix in order to analyze and investigate the implementation and adoption of e-Government in Oman using secondary data from statistical reports. The output findings show that the readiness and the ICT infrastructure require more effort and government-citizens relationship to be enhanced. Finally, the paper gives some suggestions and recommendations for better successful e-Government approach in the country.

Keywords: GOE ICT, EGDI, ITA, UNDP, HC, IDI, KI, II, KBE, EIR, KEI, UN, SWOT, TOWS

1. Introduction

Every government is seeking to provide the best services to its country to achieve efficiency and accepted performance. This goal could be achieved by improving the service performance of the entire sectors in society. Billions of dollars was invested by governments in order to undertake their first step towards implementing the e-Government project and specially implementing the best methodology of all attached and correlated electronic-based services to it like: e-payment, website, e-system, e-application...etc. Hence, they will permit new channels of interaction and communication between different government sectors and between government and business organizations. This interaction will lead to improvement in government performance and efficiency while interacting with the main and the most important category of this project which are customers. Specifically, customers in e-Government and government point of view are citizens. Moving towards e-Government would give many advantages to the country style of service along with budget usage and controlling. Indeed, it will give a great enhancement in the operation of the government in many aspects for the betterment of Government Operation Excellence (GOE).

His Majesty Al Sultan Qaboos Bin Said spoke about the importance of adopting and the usage of the new technology in the Omani daily life style on 11th Nov 2008 and he said,

“Information technology and communications have now become the main elements that move forward the development process in this third millennium ... We call upon all government institutions to speedily enhance their performance, and to facilitate their services, by applying digital technology in order to usher the Sultanate into the constantly evolving spheres for applying knowledge.” (ITA, 2010, p.5)

As a response to His Majesty’s speech, Oman Government decided to boost up the process of initiating the e-Government. Therefore, framework to move towards using Information and Communication Technology (ICT) as a platform for delivering and offering services has established by Information Technology Authority (ITA) with the following desired outcomes:

- Faster and better government services for both businesses and citizens
- More Effective and efficient government
- Better optimization of investments and resource (ITA, 2010)

This paper would review the development methodologies used in e-Government construction in Sultanate of Oman which is showing tremendous developments in all sectors in e-Government. This review through the identification of the major issues and aspects in implementing e-Government initiatives in Oman. Moreover, some major challenges in such performance would be better identified and strategically considered using important methodologies like SWOT analysis and checked using TOWS matrix. Therefore, available challenges with faced criteria along with best opportunities to be captured would be listed with related suggestions and recommendations.

2. Literature Review

Lee and Kim (2007) named the current age as the information age and that argued that the information technology application is an indispensable tendency for the organization's evolution in the 21st century regardless whether they are private or public sector organizations. E-government nowadays have an extremely high expectation to alleviate inadequate public services challenges, high government expenditures, public sectors' lack of accountability, services delivery issues and lack of citizens' participation in the process of public policy (Ibrahim, Yazici, Mishra and Arifoglu, 2005) while other stakeholder's expectations of e-government is to enhance and boost the government transformation from a beleaguered bureaucracy towards a people-centered public administration that would recognize and count citizens as customers who are essential and important to satisfy. In Benjamin's (2006) point of view, e-government has the potential and power to generate and establish profound transformation. However, it is observed that the power and speed of this transformation is strongly depends on people's believe that their contribution, participation and reaction could make a difference. Benjamin's point of view and observation consists in Berman's (1997) cynical citizens dealing research and both of them observed that the responsible to instill positive attitudes is the government by participation encouragement, up-to-date public information providence and respond to criticism raised by citizens in timely fashion (Lee and Kim, 2007). According to United Nations (UN), the countries around the world have a continuous progress in provision of online services. In 2012 e-government survey shows that the number of countries implementing e-government initiatives and information technologies is increasing especially from Arab and Middle East countries. The reason behind that is to improve the streamline governance systems and communication efficiency in order to support powerful and sustainable development. Additionally, e-government is a suitable tool to connect different administration and for disseminating information.

E-government in Oman aims to develop the modernization fundamentals of the public sector that goes beyond the permission of the supply of information towards the better optimizing of commercial process and facilitate communication and connections between government's different levels. E-government also facilitates the public administration activities development related to different businesses and citizens. The e-government incursion involved the modification of policies and models of government taking in consideration that citizen's activities should be performed with the electronically connected civil services which modifies requirement and structure of thought of people to their rules.

Through initiatives of e-government, different relationships in Sultanate of Oman and other countries in the Middle East can lead government departments to government officials, government departments, businesses and citizens. Internet voting is considered as one of the most critical and important event of e-government in many Arab and Middle East countries and this internet voting has three main possibilities which are:

- Electronic voting or as known e-voting, more used at polling station in closed system on a Local Access Network (LAN) or a secure computer network where local votes

are recorded from different individual consoles and recognized in local polling stations

- Voting kiosks or consoles that are usually located in wide access to public areas like public libraries and malls
- In remote places, internet voting is taking place in homes or offices.

The e-government UNDP report published in 2012 indicated that there are a lot of readiness in Middle East countries are categorized among better and above the average of the rest of the world in the field of readiness and e-government adoption for the populace interaction as a pro-active manner. Precisely, usage of internet in Middle East is 35.6% in comparison with 32.6% average result of the rest of the world (UNDP, 2012). Among the 77million internet users, Middle East countries are categorized as a very high number of users of different e-social networks and it has a high depending and demanding in digital communication. Precisely, the highest penetration of internet is in United Arab Emirates (UAE) where almost 70% of the citizens, preceded by Oman, Qatar, Palestine, Bahrain, KSA and Kuwait (UNDP, 2012). Al-Khouri & Bachlaghem (2011) argued that GCC countries possess a long lasting in terms of leadership and readiness in e-government field. Hence, they took variety of steps to support the diffusion of e-government within their respective societies and cities (Al-Khouri & Bachlaghem, 2011; Al-Khouri & Bal, 2007). Due to the increasing and continuous struggle and improvement illustrated by different GCC countries for promotion of digitizing their surroundings that along with the literacy rate has resulted in increasing the accumulative ranking in the UN e-government readiness survey (UNDP, 2010; UNDP 2012). Awan (2003) stated that GCC countries government are in a race with each other to develop their economy in modern and more advanced towards knowledge to shift it from completely oil dependence and create services and products to be globally competitive. They are quickly progressing and utilizing more available resources of goals of service-oriented and citizen-centric models. However, such fast reform may also ring with itself a paradigm shift in the denizens' route that these GCC countries are associated with their governments.

Huge effort conducted in these countries for the development of many aspects and services in order to enhance the environments as electronically operating manner along with the improvement of the capabilities for building and maintaining appropriate conditions to get e-citizens concept achieved (Awan, 2003).

2.1. Oman e-Government status

Oman is part of the Gulf Cooperation Council (GCC) with a total area of 309,500 sq.km and last total population of 3.992 million only. The capital of Sultanate of Oman is Muscat region and it holds a monarch government in it. E-government in Sultanate of Oman is part of the 2020 economic vision that was initiated and presented in 1995. E-government or as known locally Oman Digital or e-Oman was approved on November 2002 and it is the main foundation plan. Thus, it improves that backbone of the knowledge spreading by the e-government. The first marketing strategy initiated for e-government in the Sultanate of Oman called "Towards Digital Oman" was in 2003. The Sultanate of Oman is considered and

identified as a developing country which is located on the south east of the Arabian Peninsula (Ministry of Information – Oman, 2008b).

In Sultanate of Oman, the e-government readiness demonstrates announces that it can provide a platform to develop a new better relationship between government, service users, citizens and companies through the use of ICT that allows gathering and dissemination of services and information inside and outside government. It is obvious that the promotion of information access, transparency, accountability and anti-corruption in both government and public institutes and organizations through the usage of ICT will open opportunities to exercise civil and political rights. This aspect will reinforce the democracy and a lead to a distinct culture generation that confronts corruption, secrecy and kidnapping of public sphere by different groups of power not only by the power of public by the participation capacity and social control, oversight or monitoring but also through by official public and political leaders by improving their level of awareness towards the importance of action and decision in favor of social welfare. The effort that is being given and appointed in order to undertake the e-government project is great but there are other factors that should be considered such as the infrastructure level and capability, the penetration made up to date and operation process that a close link to the initiatives and survey known as e-participation index. E-government readiness is to measure the ability, adaptability and the willingness to move towards e-government and its implementation. Time to time update of the index in order to ensure the nature and highlights of the efforts done by the government in the corresponding period is essential. E-government initiated in 2002 and since then it generates an effort to include all major countries worldwide (Koh & Prybutok, 2003). The main idea of e-government is that it talks about the quality of the employment of online resources by the government and utilizing some scopes from other resources. Another aspect that e-government it talks about is the connectivity like the telecommunication level with the correspondent overall capability, quality and human capital. Generally, there are three main indicators to measure the performance of e-government and they are employed by taking the average of them. The three indicators are:

Online Services Index: it is the national website of the each Middle Eastern country intakes the survey's result can be obtained by the general public.

- **Telecommunication Index:** it focuses in the infrastructure that can be observed in the Middle Eastern country in the telecommunication concerned. Some of the things that are being analyzed are personal computers that are hold by the general population per 100 persons Internet users, telephone lines users and mobile cellular usage are considered in the index.
- **Human Capital Index:** it is the measure of the human capital and their overall ability to ensure that all the necessary decisions can be taken accordingly. Some of the things that are being looked at is concerned are the literacy rate of the overall population. Another consideration is that of the enrolment ratio that is being seen at the educational institutes'. The adult literacy rate as well as the total consolidated enrolment rates are one of the more important constitutes of the Human Capital Index.

If a close look at the average and overall performance of countries and their readiness in the involvement and adoption of e-government, a slide staggering could be observed from some of them. Korea is ranked first in the last survey about the e-government implementation and United States of America scored second followed by Canada. Therefore, Korea achievement and its strength can be gauged and measured from its position as the top of e-participation index followed by Australia and Spain (Evans & Yen, 2006). Thus, it has to be kept in mind that the real benefit of E-government is not about capturing and transferring information or the level of technology but it is about the way technology will be implemented at the organizational level.

The surveys that are carried out at the national, local and state level are an integral part of the government database. Through these surveys, the performance of the e-government and its idea can be improved and enhanced to a certain extent. Thus, it serves as a long way as far as the implementation of the services and procedures are concerned. The new roles for the governments can be defined and observed with it as well and there can be an improvement and efficiency in the productivity of these processes.

3. Research Methodology

In order to understand the current available trends and business practices about e-Government in Oman, There are two main concerns underlying this study.

- There is shortage of researches, reports and case studies on e-Government in Oman.
- The aim of this paper is to report and contribute to the e-Government implementations and practices in Oman through a SWOT analysis that is believed as a critical sketch for the current Omani e-Government.

This paper would combine analytical and descriptive methods together based on secondary data analysis and information derived from previous statistical reports. General literature systematic review data is provided on e-Government and the ICT sector in Oman. Moreover, SWOT analysis is applied in order to show and define the strength, weakness, threats and opportunities for e-Government approach in Oman. Hence, providing better platform and background for TOWS analysis. Finally, suggestions and conclusion are drawn on the basis of derived analytical approaches from the two methods.

a. SWOT Analysis

“SWOT analysis is an important analytical technique for understanding the performance and prospects of any issue under study through identifying the external and internal factors influencing it.” (Hassan and Sallahuddin, 2014) The internal factors include the first two parts which are strengths and weaknesses points. While the other two parts, opportunities and threats considering the surrounding environment consists the external factors. These factors would influence the system’s performance. Identifying these four factors, improvement and enhancement strategies may developed in order to enforce and overcome analyzed obstacles by enforcing strengths, eliminating weaknesses, exploit opportunities and counter threats (Hassan and Sallahuddin, 2014, p.3).

i. Strength

ICT sector in Sultanate of Oman is developing rapidly in good manner from 2010 till 2014 where it rocketed from 0.21 to 0.49 over the period 2010-2014 which indicate that it is developing well and it has a special treatment and follow-up. However, in the ICT ranking among gulf countries, Oman is still the last one and its development index (IDI) is before the last (ESCWA, 2014). Another aspect which is considered as strength is the e-participation where it increased dramatically over the same indicated period from 0.16 to 0.71. Besides to the indicated aspects, online base index is scoring high and increasing rapidly from 0.37 to 0.73 for the same period. E-participation and online index show that citizens are having more engagement in the e-Government implementation and development and that the e-Government approach is moving towards citizens-centricity. Hence, Chan et al. (2010), Vencatachellum & Pudaruth (2010), Abdulwahab & Dahalin (2011), Keramati & Chelbi (2011), Lessa et al. (2011), Alzahrani & Goodwin (2012) adopted different empirical study in order to have a system facilitating e-Government as more of citizen-centricity and to influence citizens and their intentions to use as the main goal. All of these indicated strengths of the e-Government in Oman reflected in the E-Government Development Index (EGDI) and enhanced the e-Government ranking in the world. Since, EGDI shifted from 0.46 to 0.63 and therefore Oman e-Government ranking enhanced from 82 position to 48 position among 192 countries analyzed in the study (ESCWA, 2014).

ii. Weaknesses

Innovation in Oman is showing a weakness spot and it show that it requires special treatment with better planning in order to be developed and meet the desired goal. As indicated earlier, Although ICT in Oman is still developing but it still considered below the average and still in the last position compared to the GCC countries. As per the Knowledge Innovation (KI), Oman score is 5.87 and it is in the 4th position compared to GCC just slightly higher than Kuwait and Qatar. The same issue is clear in the Innovation Index (II) where it ranks 75 in the world and the last among GCC with efficiency of 0.6% only. This show a severe issue that government should consider it as very important aspects in order to eliminate it and overcome it (ESCWA, 2014).

iii. Opportunities

There is a bright spot in the Omani economic side in the surveys especially in Knowledge-Based Economic Index (KBE) and Economic Incentive Regime (EIR) where both of them show good position and development. As per the EIR Oman is in the first position among GCC countries with score of 6.96 in 2014 while KEI score is 6.14 in 3rd position after UAE and Bahrain. These opportunities could be captured and exploit by enhancing the education index which show a blind spot in this area which decrease the knowledge index. Since, education index score is 5.23 and ranked 4th among GCC (ESCWA, 2014).

iv. Threats

As indicated earlier, although IDI is increasing in Oman and its ranking worldwide is

improved by 9 positions to move from 61st to 52nd position over the period 2012 to 2014 but it is still slow compared to GCC and it needs to be improved and get more focus and consideration. Another aspect is the Human Capital Index (HC), this indicator was showing good enhancement till 2010 when it started again to reduce and downward trend where it dipped from 0.8 to 0.66 over the period 2010 to 2014. This indicator is attached to Gross Indicator Product (GDP) in the country and it shows a fluctuation and instability readings over the period from 2009. Figure 1 shows GDP readings over the mentioned period (ESCWA, 2014; ITU, 2014).

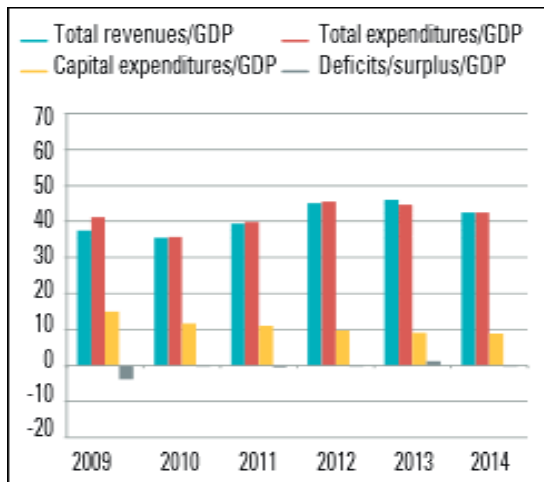


Figure 1: GDP readings from 2009 to 2014

b. TOWS Matrix

Wehrich (1982) has developed TOWS as an extension of SWOT analysis to make it more applicable and reality grounded. It is used for analyzing external environment (threats and opportunities), along with internal environment (weaknesses and strengths) for drawing strategies and visions. It has combination of the external and internal factors that would result a new strategy as shown in Table 1. Mainly there are four different combinations are developed (Ravanava & Charantimath, 2012; Wehrich, 1982; Hassan and Sallahuddin, 2014):

- SO-strategies: this is where governments utilize and reinforce its internal strength factors for exploiting available opportunities in external environment.
- WO-strategies: this is where governments reduce internal weaknesses that act as obstacles and barriers for external opportunities implementation or diffusion.
- ST-strategies: this is where governments use internal strength factors to minimize external factors threatening affects in performance or competitiveness.
- WT-strategies: this is where governments eliminate internal weaknesses for avoiding any breakthrough or prevalence of external threats.

SO	WO
Network strategy: Expanding available broadband capacity through the enhancement of investments in infrastructure and networks.	Broad band speed strategy: Conducting external innovations specially in ICT would enhance the strategy and increase local education and experience
ST	WT
Human capital strategy: The government should focus on the empowerment of skilled human capital in order to enhance training and education within local citizens.	Funding strategy: Government must approach different kinds of funds in order to minimize weakness especially in ICT development in infrastructure and network.

Table 1: TOWS Matrix for e-Government in Oman

4. Suggestions and Conclusions

Omani government needs to consider different basic factors illustrated and defined by United Nations and other benchmarking agencies. It will be more effective and efficient if the implementation of e-Government system is in proper manner. Thus, e-Government system is playing an essential and important role in the transformation process in modernizing work instruments, enhancement of governance and improving government-citizens relationship. Based on the above discussion, well training and educational system would enhance talented human capital and attempts which seems to be reducing in the last 4 years especially in ICT sector in Oman should return back to be considered the strength points sector because it still facing some challenges. “The most important issue in implementing successful e-Government is the citizens’ acceptance and usage. The citizens need to be trained and educated to use the e-portal services available in the corresponding structure.” (Mohammed and Sriram, 2014).

For instance, lack of efficient leadership, lack of resources, bad internet quality and slow speed of the internet connection. Thus, successful implementation of e-government in Oman is highly dependent on the commitment level from the political authority, the infrastructure readiness and the awareness level in the government and the public to reduce change and transforming resistance. Effective e-Government system is attached with proper planning continuous assessment due to the changes at both external and internal environments. Thus, SWOT analysis and TOWS matrix should be studied regularly in the future in order to keep proper monitoring system with the emerging innovations in the country and neighborhood situations.

5. Limitations and Future Scope

The main limitation of this study is that the collected data is from the internet resources and suggestions are based on the available literature. Therefore, the study shall be further enhanced and developed by conducting a quantitative survey with various stakeholders and users of e-Government portals. Hence, findings and suggestions may differ if primary data analyzed.

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