

# **A review of the information management systems used in the public sector of Saudi Arabia**

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## **Abstract**

The aim of this research was to review of the information management systems used in the public sector of Saudi Arabia. The Google Scholar database was searched for the key works, 'Saudi Arabia, 'Public Sector' and 'Information Mangement Systems'. Journal articles and books published up to 2017 were searched. A total of 5 papers were shortlisted for this review. The main findings from the review are: (1) The use of information magement systems is not widespread in the Saudi public sector, and there are departments which still do not use such systems; (2) The information management systems that are in use in the Saudi public sector are mainly being used for e-governance; (3) In the cases where the information management systems exist in the Saudi public sector, the level of adoption by the target users is hindered by lot of barriers and can be increased by the use of intermediaries; (4) The information magement systems used in the Saudi public sector may not be able to be efficient and effective unless the telecommunication infrastructure is optimal; and (5) The level of adoption of information management systems in the Saudi public sector can be explained by relative advantage, compatibility, complexity, trialability, and observability levels. Overall, it safe to say that the use of information management systems in the Saudi public sector is at a nascent level, and it has a long way to go before it becomes efficient and effective and is adopted widely by the citizens. It is expected that these findings will provide insights about the current status, issues and future direction relating to the use of information management systems in the public sector of Saudi Arabia.

**Keywords:** Information Management Systems, Saudi Arabia, Public Sector

## **Introduction**

According to Techopedia (2017) "Information Management System (IMS) is a general term for software designed to facilitate the storage, organization and retrieval of information." A vast majority of the information is in a digital format. Information management systems provide an efficient platform for businesses and other organizations (e.g., the public sector) to manage their information management needs. Such systems also have the advantage of being more accurate, reliable, and almost-indestructible than traditional systems (e.g., paper-based systems). Information magement systems have applications for a large number of functions in an organization including human resources, sales and marketing, inventory control, and financial data management.

The government departments all over the world endeavor to reduce costs, improve services for citizens and increase their effectiveness and efficiency. Abdullah et al. (2006) studied the motivations for change towards e-government adoption in the public sector of Saudi Arabia. The authors categorized the reasons for adoption of e-government as economic reasons, geographical reasons, social and cultural aspects, reforming the public sector, technical reasons, demographical reasons, political reasons, regional comparisons, and citizens' expectations.

Given that information management systems underlie the adoption of e-government systems, these motivations also apply to the motivations for using information management systems in the Saudi Arabian public sector.

The aim of this research is to review of the information management systems used in the public sector of Saudi Arabia. It is expected that this research will provide insights about the current status, issues and future direction relating to the use of information management systems in the public sector of Saudi Arabia.

## **Methodology**

Initial research indicated that there is not much literature available relating the use of information management systems used in the public sector of Saudi Arabia. For this reason, apart from relevant journal articles, books covering this topic were also considered for the review. The Google Scholar database was searched for the key works, 'Saudi Arabia, 'Public Sector' and 'Information Management Systems'. Journal articles and books published up to 2017 were searched. The search yielded a large number of papers and books. The papers available in the first five pages of the search results were reviewed for their relevance and out of these a total of 5 papers were shortlisted for this review. The results from the review are summarized in the next section.

## **Review**

Almalki et al. (2011) studied the health care system in Saudi Arabia. Specifically, they reviewed the "historical development and current structure of the health care system in Saudi Arabia with particular emphasis on the public health sector and the opportunities and challenges confronting the Saudi health care system". Amongst other issues, the authors found that Saudi Arabia lacked a national health information system. This indicates that information systems (specifically a health information system/s) were not in use by the national health department in Saudi Arabia at the time of the research.

Al-Gahtani (2003) conducted a primary research into the adoption of computer technology in Saudi Arabia. The researcher surveyed about 1,200 knowledge workers in 56 public and private medium and large organizations across Saudi Arabia. The participants were from different managerial levels and represented a wide range of industries. The study found that Rogers' five attributes of innovation namely, relative advantage, compatibility, complexity, trialability, and observability explain a large proportion of the variance in the innovation rate of adoption. This may indicate that getting an understanding of the relative advantage, compatibility, complexity, trialability, and observability levels with regards to the innovation rate of adoption in the public sector of Saudi Arabia may provide markers for the adoption of information management systems.

Al-Sobhi et al. (2010) conducted an exploratory study on the role of intermediaries in delivering public services in Madinah City of Saudi Arabia. The aim of the study was to investigate the role of the intermediaries in delivering public services to different stakeholders (e.g., business and citizens), and to highlight the challenges that face the development of e-government services in the context of Madinah City. The authors conducted a review of relevant literature and found that citizens' adoption of e-services in Saudi Arabia was being hindered by a digital divide and poor infrastructure. The research also found that intermediaries helped in increasing the availability of e-government services to citizens. This indicates that cases where information management

systems exist in the Saudi public sector, the rate of adoption is low and can be increased by the use of intermediaries.

Alshehri and Drew (2010) studied the challenges of e-government services adoption in Saudi Arabia from the perspective of e-ready citizens. The authors asserted that e-government was one of the top priorities for Saudi government and all its agencies, and its adoption was facing many challenges and barriers such as technological, cultural, organizational, and social issues. The authors surveyed a sample of e-ready citizens and identified some important barriers from the perspectives of the e-ready citizens. The top 5 barriers were IT infrastructural weakness, lack of knowledge about the e-government program lack of security and privacy of information, lack of qualified personnel and training courses, and culture differences. This indicates that in the cases where the information management systems exist in the Saudi public sector, the level of adoption by the target users is hindered by lot of barriers.

Alshomrani (2012) conducted a research whereby he compared the United Nations e-government indicators between the United States and Saudi Arabia. The methodology involved comparing e-government survey reports compiled by the United Nations between 2003 and 2010. Amongst other findings the study found that Saudi Arabia lagged behind the United States in telecommunication infrastructure indicators relating to e-governance. This indicates that the information management systems used in the Saudi public sector may not be able to be efficient and effective unless the telecommunication infrastructure is optimal.

## Conclusions

The aim of this research was to review of the information management systems used in the public sector of Saudi Arabia. A review of relevant literature was conducted to address the aim of this research. The main findings from the review are:

1. The use of information management systems is not widespread in the Saudi public sector, and there are departments which still do not use such systems.
2. The information management systems that are in use in the Saudi public sector are mainly being used for e-governance.
3. In the cases where the information management systems exist in the Saudi public sector, the level of adoption by the target users is hindered by lot of barriers and can be increased by the use of intermediaries.
4. The information management systems used in the Saudi public sector may not be able to be efficient and effective unless the telecommunication infrastructure is optimal.
5. The level of adoption of information management systems in the Saudi public sector can be explained by relative advantage, compatibility, complexity, trialability, and observability levels.

Overall, it safe to say that the use of information management systems in the Saudi public sector is at a nascent level, and it has a long way to go before it becomes efficient and effective and is adopted widely by the citizens.

It is expected that these findings will provide insights about the current status, issues and future direction relating to the use of information management systems in the public sector of Saudi Arabia.

## References

- Abdullah, A., Rogerson, S., Fairweather, N. B., & Prior, M. (2006). The motivations for change towards e-government adoption: Case studies from Saudi Arabia. In *E-government Workshop* (Vol. 6, No. 1, pp. 1-21).
- Albejaidi, F. M. (2010). Healthcare system in Saudi Arabia: An analysis of structure, total quality management and future challenges. *Journal of Alternative Perspectives in the Social Sciences*, 2(2), 794-818.
- Al-Fakhri, M. O., Cropf, R. A., Kelly, P., & Higgs, G. (2008). E-government in Saudi Arabia: Between promise and reality. *International Journal of Electronic Government Research (IJEGR)*, 4(2), 59-85.
- Al-Gahtani, S. S. (2003). Computer technology adoption in Saudi Arabia: Correlates of perceived innovation attributes. *Information Technology for Development*, 10(1), 57-69.
- Almalki, M., FitzGerald, G., & Clark, M. (2011). Health care system in Saudi Arabia: an overview.
- Alshehri, M., & Drew, S. (2010). Challenges of e-government services adoption in Saudi Arabia from an e-ready citizen perspective. *World Academy of Science, Engineering and Technology*, 66, 1053-1059.
- Al-Shehry, A. M. (2009). Transformation towards e-government in the Kingdom of Saudi Arabia: technological and organisational perspectives.
- Alshomrani, S. (2012). A comparative study on United Nations e-government indicators between Saudi Arabia and USA. *Journal of Emerging Trends in Computing and Information Sciences*, 3(3), 411-420.
- AlSobh, F., Kamal, M., & Weerakkody, V. (2009, July). Current state of e-services in Saudi Arabia: the case of intermediaries in facilitation government services in Madinah city. European and Mediterranean Conference on Information System.
- Al-Sobhi, F., Weerakkody, V., & Mustafa Kamal, M. (2010). An exploratory study on the role of intermediaries in delivering public services in Madinah City: Case of Saudi Arabia. *Transforming Government: People, Process and Policy*, 4(1), 14-36.
- Al-Sobhi, F., & Weerakkody, V. (2011). The roles of intermediaries in e-government diffusion and adoption: A case study of madinah city in Saudi Arabia. In *Stakeholder Adoption of E-Government Services: Driving and Resisting Factors* (pp. 103-115). IGI Global.
- Leidner, D. E., & Kayworth, T. (2006). A review of culture in information systems research: Toward a theory of information technology culture conflict. *MIS quarterly*, 30(2), 357-399.
- Julnes, P. D. L., & Holzer, M. (2001). Promoting the utilization of performance measures in public organizations: An empirical study of factors affecting adoption and implementation. *Public administration review*, 61(6), 693-708.
- Rose, G., & Straub, D. (1998). Predicting general IT use: Applying TAM to the Arabic world. *Journal of Global Information Management (JGIM)*, 6(3), 39-46.