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" An analysis on the role of information technology governance on reducingthe business IT gaps in Oman's companies."

Muslem Ali Al-Toubi *Student,*
Middle East CollegeMuscat,
Sultanate of Oman

Abstract

Information technology is referred to as the usage of computers and other technology-related devices to create, process, store and exchange different types of electronic data. Information technology is used widely in business operations and for other purposesalso (Castagna, 2020). Most commonly IT is used for the ease of business operations. Companies use information technology to automate their operations and gain a competitive edge. The governance of information technology is referred to as a discipline that monitors the usage of technology in companies. Business organizations use information technology as a tool to improve the efficiency and the effectiveness of their business activities, some organizations use IT to reduce business costs. The ability of the organizations to gain a competitive edge and improve overall performance in the market is influenced by the use of the latest technology (Ghildyal & Chang, 2017).

Organizations that embrace the technology can have all these benefits which refer to the governance of the technology in organizations. IT governance focuses on the practices that are followed by the organizations to meet their goals.

1. Introduction

Information technology has brought a resolution to the business. Technological advancements have provided leverage to the organizations to expand and enhance their business practices. Presently information technology has become an essential part of almost every business plan. From multinational organizations to small medium enterprises almost every organization is using technology. The use of information technology in business organizations has started to bring ease to business operations. Such as for automation and to gain a competitive edge in the fast-growing market. Moreover, organizations are adopting the latest technologies to enhance the efficiency of the operations and bring advancement to their business practices as it is even helpful in reducing business costs and saves a lot of time. As the use of IT has increased in organizations, its governance and management also hold importance such as the governance of information technology in an organization monitors the overall usage in companies. The usage of IT in organizations points towards proper governance. IT Governance is referred to as a process that ensures the effective and efficient usage of information technology to assist an organization to fulfil its aims and

ambitions. Collectively information technology governance includes tools, processes and methodologies that are adopted by the organization in order to align its business strategies and goals regarding IT related service. It aims to use and manage information technology for achieving work objectives. The word governance refers to the high-level view of the organization's information technology assets and involves the processes which govern these assets, and it influences economic growth as well. Based on the definitions above it is seen that in Oman several organizations have adopted the usage of information technology in order to enhance their business practices and to improve their overall performance. This adoption has resulted in a productive business environment in firms. Most importantly IT governance helps the alignment of information technology practices of an organization along with its business practices which helps an organization to grow in the market of developing countries (Yayla & Hu, 2012). The ability of an organization in Oman to compete in the market is boosted with technology adoption. Here comes the fact according to which these technological incorporations in an organization are only beneficial if an organization is present in the environment where technology is embraced. Despite all the advantages associated with the usage of these technologies in organizations, several challenges are faced by organizations in Oman. Major challenges and risks involve the cost that is required for the incorporation of the technology such as small organizations do not have huge budgets, so it becomes difficult for them to adopt newtechnology.

Moreover, technological issues or mismanagement of information technology resources also cause a business-IT gap. Oman is considered a developing country and the economy of the country is referred to as an upper-middle- income economy along with other Middle Eastern countries. For the developed countries organizations have more resources to develop strategic visions in order to enhance the usage of IT or incorporate information technology governance

(Ghildyal & Chang, 2017). The risks associated with IT can be efficiently handled by them in comparison to the developing countries where firms do not have such resources as organizations in Oman struggles to organize the use of information technology and its successful adaptation in the environment. Although it is considered as the priority of the government in Oman to advance the business environment as the growth of organizations is highly associated with the economic development of the country. In many organizations, traditional methods of services for the customers are used. The used methods in several organizations are ineffective and it has caused a business-IT gap. Moreover, some organizations do not promote the use of information technology because of the threats associated with its incorporation and it has influenced the gap. The policy of the Omani government is to leverage the use of information technology and influence the investment in this sector to promote and increase the business value of the organizations (E.Oman, 2018). Most importantly the small-medium

enterprises in Oman have a high rate of failure in

comparison to the established organizations. Firstly, these organizations do not have many resources, so it is quite difficult for them to keep up with the growing market which relies on technological advancement and this fact has caused business gaps in these organizations. Another reason for the failure of these organizations is the lack of knowledge regarding IT advancements and the lack of governance in their organizations (Buraiki & Khan, 2018). The increase in the dependency of organizations on technology has influenced the usage of e- commerce to complete business operations which cannot bring successful results without the incorporation of IT governance. Organizations in Oman are highly in the need of IT governance policies to be incorporated into their business.

Based on all these facts this environment. research is focusing on analysing the role IT governance can play to identify the business IT gaps in the organizations of Oman and aim to develop an assessment model. This model will be used by the organizations for the assessment of their current IT governance practices and based on the finding's organizations will be able to develop their business strategy. This research is using quantitative research methodology to analyse the companies in Oman. The next sections of this chapter include the research objectives and research questions. It also includes the details of the research gaps and research rationale which is considered important to identify the importance of the research that is being carried out. Lastly, this chapter includes a thesis organization that shows the complete overview of the dissertation.

2. Research Objectives

The objectives of this research are stated below

1. Identification of the business IT gaps in Omani companies.

2. How information technology governance can play a role in removing business IT gaps in Omani companies.

3. The objective of this research is to develop an IT governance assessment process model for the companies which can help to enhance their IT practices by examining their current structure.

3. Research Questions

1. What are current practices followed by the companies and how these practices are insufficient?

2. How will the produced model help organizations and IT executives assess the effectiveness of their current practices?

3. What role IT governance can play in reducing business IT gaps in Omani companies?

4. What are the important factors that are required to be considered while identifying the business IT gaps?

5. How can IT governance enhance the business practices of Omani companies?

6. What are the potential causes of business IT gaps in Omani companies?

4. Research rationale

This research is considered important as it is highly focused on identifying the business gaps in Omani organizations. IT governance is considered

Important in making the organization successful in its IT operations. The discipline of IT governance faces some gaps regarding its growth from the point of view of both theory and practice. There is a need for the identification of the gap for the successful implementation of IT governance in organizations of Oman. Presently there are several challenges faced by organizations in Oman regarding their information technology practices. Due to challenges, some organizations are losing their competitive edge as they do not have implemented the IT governance policies (Alqassabi, 2019). Some of the organizations did not adopt the latest technology as they do not have resources to manage the technology and as a result, they develop a business IT gap which made them lose their competitive edge. IT governance is considered important as it includes several procedures and steps in managing the use of technology in the organization and by doing so it can improve the structure of the overall organization. Based on these facts this research is focusing on analysing the role of IT governance in Oman's organizations. This research carries this aim to reduce the business IT gaps from organizations in Oman. Most importantly this research is unique as it develops a framework that includes the set of rules that will make organizations able to conduct an assessment regarding their current IT practices and based on findings organizations will be able to make their strategies.

5. Research gaps

In literature, less evidence is found which purely Focuses on analysing the role of IT governance in identifying the business IT gaps in Omani organizations. Several types of research found focuses on other parts of the world. Very little research evidence focusses on the organizational practices of Omani companies. Moreover, not many researchers have developed an assessment model for analysing the current gaps in the organizations in Oman. This research aims to fill these gaps by following the quantitative research methodology along with developing an assessment model which will be helpful for the organizations to identify their gaps and make their strategies accordingly.

4. Literature review

The second chapter of the research includes a detailed review of the literature. This chapter holds and importance in the dissertation as all the related research in the chosen area are reviewed in this chapter based on which the research gaps are identified which shows the importance of the current research. For the literature part this research aims to use articles published in past 5 years based on the inclusion and exclusion criteria in order to develop a depth understanding towards the chosen topic. The methodologies and frameworks developed by the previous researchers will be discussed under this section based on which it will become easy for the researcher to develop a strong methodology.

6. Information Technology in Oman

Sultan Al-Ruzaiqi & Baghdadi in 2016 described e-Oman or Digital Oman strategy. In order to bring a common information technology infrastructure among entities of Oman government, e-Oman strategy plays a vital role. This also help in provision of information communication technology (ICT) facilities to government entities. They have explained that the authoritative body of Oman government i.e. Information Technology Authority, which ensure proper integration of government bodies inside Oman. They have examined the largest initiative of e-technology transformation known as Invest Easy Project in Oman. This project brought many success stories with adequate integration with government bodies. Khalfan & Alshawaf in 2014 have identified the impeding factors which resist the usage of e-banking in banking industry of Oman. They adopted the methodology of structured interviews,

questionnaire and bank documents reviewing. The samples involved were managers and executives. Results of the study provide practical picture with factor identification. They have come to know that the major inhibiting factor in e-commerce banking is lack of support from top management. In financial sector, security concerns and privacy issues were considered as serious factors which inhibit the usage and adoption of e-banking. However, some of the factors such as power relationships and absence of investment among applications of electronic commerce were observed as non-significant inhibiting factors. They have suggested that e-banking strategies will be better applicable with specific and relevant research in business. This will be understandable with carrying out comparison studies in other developing and developed countries. Elshaiekh et al in 2018 have discussed the small and medium enterprises (SMEs) in context with impact of IT in Oman. They have explained that SMEs are vital sources in bringing the nation towards high income. They have higher potential to transform the economy of the country by providing strong foundation to the industries. SMEs foster entrepreneurship with strengthening economic sector, increasing the employment status, higher the growth of exports and outcomes with challenging conditions. They have discussed that opportunities for development of businesses were fostered by the use of information technology in SMEs. Information technology have advantageous impact on SMEs. This paper suggested that majority of the respondents were aware of advantages of information technology and its use in SMEs. The requirements in the increasingly growing markets have encouraged digitization of both small and medium businesses using advanced informationtechnology.

Some of the participants of the study also have neutral responses due to many other reasons that they might face in their lives.

Thototoli had carried out a research study in Oman to know the knowledge and understanding of accounting software use. This was checked in small and middle business entrepreneurs. The approach used in this research was qualitative with purposive sampling. A semi structured interview was carried out to evaluate the knowledge and use of soft wares in accounting. The subjects in this research were accountants contributing in SMEs of Oman. A small sample size of six accountants were selected and arranged for semi structured interview. From this study, the author came to know that knowledge plays a significant role. Those participants who have better knowledge and understanding of accounting software can have significant and positive association. Those having the use of softwares either customized or generalized have significant association in SMEs. In addition to this, it was also known that those who have the knowledge about these softwares show significant association in terms of their use in SMEs of Oman. This study brings new practical implications of ICT in accounting softwares. It was also understood that participant's knowledge will enhance their practical professional use of these accounting softwares. This research has strength in terms that very little literature was available in context of the accountant in SMEs. This study contributes not only to theoretical but also practical knowledge among people.To determine how information technology can help in different business prospective and increase work efficacy, the views of Nehad, Al- Hadi & Al-Aufi (2019) explained how workers can increase their productivity by using mobile social practices and different technical approaches. The study based on task-oriented- approach that provided clear vision about working trends of nomadic workers

Regression model was used while taking five variables specifically. These variables were management of the activities of internal audits, professional care of work environment, quality assurance along with nature of activity, and finally programs involved in their improvement. The findings of this research suggested that there was a significant association between auditing activity and good governance. Except for three factors i.e. quality assurance, programs involved in improvement and management of auditing activity which were not significantly associated with corporate governance, remaining factors showed a positive association. This showed that the need for improvement in effective governance while using IT governance as top priority will be proved as highly significant in bank audits.

7. IT GOVERNANCE

According to Alhinai et al in 2016, ICT was one of the critical concerns which enable the government to achieve organizational goals with improved service delivery and participation of citizens. This research has identified the importance of ICT in communicating with people in a timely and accurate manner. There was proper governancerequired which will be

advantageous in management of challenges faced by growing IT businesses. IT governance would be helpful in ensuring the proper alignment of the use of information technology with goals of the business. It

would make things certain that policies, strategies and goals were solid

aligned with eachother using information technology standards. But in Oman the IT governance was established to some extent with principles and standards.

IT infrastructure of any business organization make it possible for itself to develop competitiveness in comparison to other organizations, involvement of accurate data and information and quality effectiveness in terms of operating costs. Thus, role of IT governance is considered as very important to maintain its IT structure and reduce the gaps which inhibit the organizations to achieve their goals.

According to the standards proposed by Sultanate of Oman in context of IT government policy, the purpose of IT governance was to investment in value delivery of information technology to the business. Selig in 2016 explained the role of IT governance. It was considered important for IT governance to perform their role in management of IT resources, monitoring of IT performance, identification and management of risks associated with the use of information technology. It was also observed that IT governance should perform their role in making it certain that it was performing its part with effectiveness and great accuracy in use of information technology with least value ofassociated risks.

Lagging behind many countries of Gulf due to technological advancements. They have advanced their businesses with new and innovative technology such as fintech, cryptocurrency, data hosting, cybersecurity and autonomous logistics infrastructure etc. But in the present, Oman government is enhancing the IT governance to reduce the already established gaps with innovative structure of information technology such as cryptocurrency, cost effective small and medium businesses with IT infrastructure. This encourages towards development of Oman with digital infrastructure. He further added that digitizing the services in Oman could greatly be helpful in reducing the inefficiencies and gaps exists within the business IT groups or companies. Therefore, the authoritative body in Oman is allowed to digitize 59 companies and institutions governed by the government by 2022 to meet theIT challenges of the growing world. Digitization of the services in Oman had started already but they face the problems of security such as cyberattacks. Therefore, safeguard business IT from these malicious attacks will be beneficial to reduce IT gaps among business companiesof Oman.
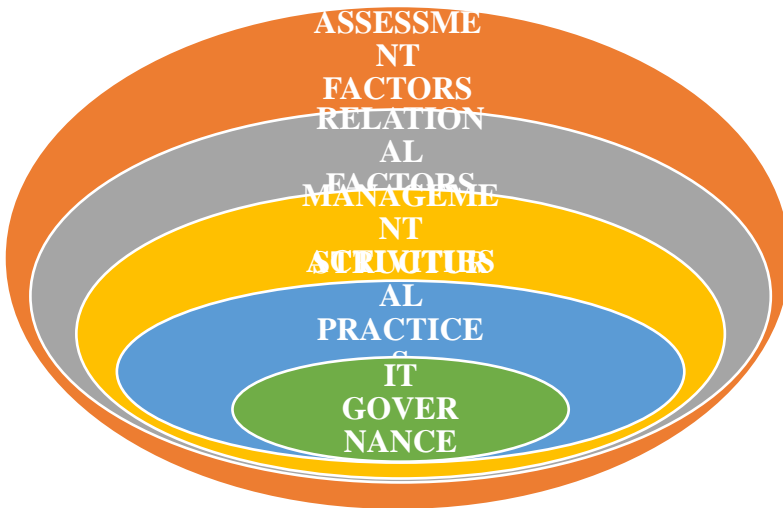
Alkhaldi, Hammami & Uddin in 2017 performed a research study to inquire about

COBIT model as controlled framework with high governance. The data was collected with the help of questionnaire method while targeting forty private business organizations with a sample size of 179 participants. The respondents targeted weremanagers belonged with tactical and strategic level in an organization. The results of this study were

analyzed by using SPSS software and EQS. The Findings of this research indicated that COBIT

model i.e. Control Objectives for Information and related Technologies, awareness with IT governance is well satisfied. The factors considered important in this regard were business alignment, IT performance, IT risk and resource management suggested by COBIT framework. IT governance is best indicated with a leading factor of IT risk management as suggested by the findings of this research. However, business or IT alignment is a factor which is least associated with non-significant value statistically. Thus, the overall outcomes will develop a better understanding of all these factors with the help of using COBIT framework.

4. THEORETICAL FRAMEWORK

Al Hilali, Ahmed & P in 2021 stated that organizations are continuously striving to empower and promote strategic decisions. IT governance play their role in effective management of enterprises with policies and regulations in order to control and manage operational information technology. The primary goal of IT governance isto improve the business projects with timely manner, relevancy and high quality. The authors focused on identifying the gaps which hinders in their implementation process specifically in public sector of Oman. It consists of conceptual framework of the factors involved in good governance such as practices in terms of structure, relational factors, activities included in its management and assessment factors.

FIGURE # 02: FACTORS INVOLVED IN IT
GOVERNANCE

ASSESSME
NT
FACTORS
RELATION
AL
FACTORS
MANAGEME
NT
ACTIVITIES
STRUCTUR
AL
PRACTICE
S
IT
GOVER
NANCE

FIGURE # 03: IT Governance Formula derived
from COBIT 2019 (Sheen, 2020)

This research involved two different studies with independent samples. To test substantive hypotheses, method for analysis such as EFA, CFA and SEM were used. EFA i.e. Exploratory Factor Analysis, CFA i.e. Confirmatory Factor Analysis and SEM i.e. Structural Equation Modelling. The results of the study suggested that some of the factors i.e. IT data backup, policies and standards, strategic communication, data recovery, metadata/ big data and assessment were all significantly associated with its implementation. Proper implementation of IT governance positively influences the overall performance of that particular business organization. These significant contributing factors help in appropriate implementation of information technology governance with better outcomes of organizational performance.
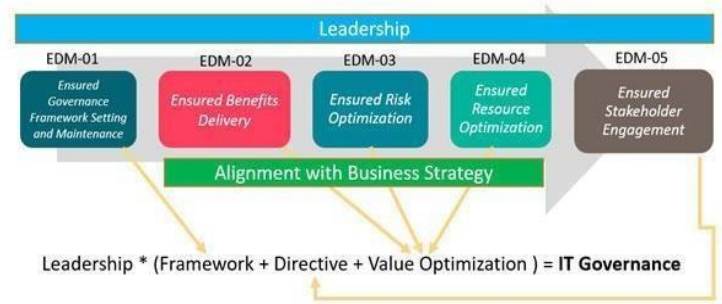
4. SUMMARY

Information Technology governance plays a significant role in managing business IT infrastructure. Previously Oman was just focusing on strengthening its economy with oil assets. But due to lower prices and other issues, it will become difficult for Oman to strengthen its national economy. Thus, small and medium enterprises play their role in rebuilding their national economy with the help of adoption of new and innovative IT tools. SMEs in Oman were continuously facing challenges which will be critical to maintain. Their sustainability become the major challenging situation for the government. Therefore, the government understood the importance of SMEs in reducing unemployment and providing diversity of work to people with improvements in national economy of Oman. But Oman is having poor structure of IT governance which needs to be modified. The role of IT governance is considered as very important to maintain its IT infrastructure and reduce the gaps which inhibit the organizations to achieve their goals. The gaps which were most commonly observed as lack of digitization, improper or poor investment in IT business and governance and security problems such as cyber- attacks. It is the responsibility of IT governance to balance risks with improvement in the results, determining IT capabilities of a business

organization with approaches of IT investment, enhancing IT governance with steady flow of integration and communication with members, government and stakeholders. A number of large businesses in Oman are shifting themselves towards the use of new and innovative computer technology to advance their business processes. This will encourage them to adopt methodologies which benefits the whole country with leastpossible gaps that make the business hard to manage. Therefore, heading Oman towards economic stability and improving business IT practices is greatly important for the progress of whole country.

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