Addressing the Barriers of Implementation Management Information Systems in Business Organization

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Abstract

At present, the Management Information System (MIS) is a strategic component that allows the development, growth and continuous improvement of public and private sector organizations. In this specific context, this thesis is included in the critical and exhaustive study of the factors that characterize the implementation of MIS, challenges that are faced while its implementation, the strategies that favor its development and, finally, propose metrics that allow its evaluation, with a view to the continuous and systematic improvement of this type of practices in organization. Mainly addressed problems related to the lack of academic literature that explains the elements of knowledge management about MIS in the given context. At the same time, there is a lack of in-depth analysis of the factors that make knowledge MIS possible and which favor its success in business. Also, the absence of criteria to measure and evaluate the implementation of MIS is identified as a problem in public organizations, from a different viewpoint to the business perspective. The contribution of the present thesis is that it provides valuable elements for an academic debate on the previous factors, the strategies to favor and the metrics with which the different initiatives of MIS in institutions can be evaluated. In order to achieve the research objective of this thesis, an exhaustive systematic review of the literature has been carried out in order to know which are the main critical factors of success that have been studied up to now, as well as some metrics, as a proposal, to evaluate the performance and success of MIS in different level of businesses. Next, an in-depth qualitative study was carried out in an organization of Maryland to know regarding the critical success factors requires in the implementation of MIS. Targeted population, for the study, was the project managers. For the selection of the sample, the purposive sampling technique was utilized. Interviews was

administered for data collection. Finally, based on this methodological proposal and as a result of this research work, critical success factors were identified, strategies to encourage the success of MIS was identified, and some proposed metrics were integrated, providing different approaches for MIS for organizations. Information gathered from this thesis will be helpful for administrators of organizations to identify better ways to implement MIS. Moreover, this study will also be helpful for the improvement of MIS.

DEDICATION

This dissertation is dedicated to my dearest friend (Prof. Sulyman A. Kuranga), my wife (Hannatu Bolanle Ayanda-Memudu), the entire family, the faculty, and colleagues in the completion of this research. I would like to thank my deceased Mom and Dad (Asunmawu Gogo and Alhaji Aweda Memudu) for believing in me and always been by my side. I would like to thank my brother and sister (Isiaka Ayinla Memudu and Sifawu Arike Akanho) for always being there to listen to me. I would like to thank my four sons and four daughters (Sabinat Folashade, Nasir Temidayo A., Najim Abiodun A., Tariq Olaitan A., Aminat Kehinde A., Mariam Taiye A., Aishat Idowu A. and Abdulrahman Alaba A. Memudu) for their unconditional love, patience and support. Yes, Kids, you can now call me, "Doctor Daddy." My life goals are to leave this world in a better shape than when I arrived. Just by looking at my eight children, I know these goals are accomplished. I wish to dedicate this research to my dear children.

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Chapter 1: Introduction

Project management is useful in the domain of information systems since projects in this area diverse technical, human, and business issues. Thus, project management is widely applied in addressing many business challenges, unlike in the past where it was mainly applied in state mega projects. Interest in this field can be linked to various external factors, such as outsourcing, heightened competition, globalization, environmental pressures, and the limitation of resources and time in spite of the steady rise in the demand for quality products and services (Herds, 2016). Project managers should strive to ensure the successful of their projects by being responsive and highly sensitive to corporate and human issues, without simply apply and adhering to the set business rules and procedures. This process is exceedingly relevant to the discipline of information systems (Kavata, 2014). Thus, they should be perceptive and responsive to complex situations that necessitate a coordinated and multi-faceted response and exploit their experience while addressing such issues. Importantly, modern enterprises often engage in information system projects due to their implication in their daily operation. However, information system projects are usually capital-intensive and risky, making it essential to focus on these important projects since they can be highly valuable to companies.

In business organizations, there are numerous factors and issues impacting the overall quality and level of performance. In the modern world, the use of advanced technological platforms serves as one of the main platforms on which the performance of a business organization can be enhanced (Paterson, 2012). This is because technology can enhance the

overall level of decision making, analysis as well as innovativeness. In line with this stipulation, management information systems constitute one of the best technological platforms that can be used in a business (Davis, 2006). Such systems are characterized by distinctive components that facilitate for the flow and delivery of data from one level to another (Glover, 2011). In line with this stipulation, management information systems facilitates for a high level of competitiveness. Despite the fact that the use of management information systems in a business organization is characterized by numerous beneficial implications, the implementation process is associated with many barriers and stumbling blocks. Most business organizations do not have the relevant mechanisms and strategies of identifying such barriers and addressing them accordingly.

The need for implementing management information systems across business organizations in the modern world is extensive (Paterson, 2012). One of the main beneficial implications of the use of management information systems in businesses pertains to decision making (Davies, 2006). Decisions must always be based on facts as well as data concerning the issue at hand. In the event that business decision making processes are not aligned towards facts, then the outcomes are compromised (Paterson, 2012). The use of management information systems goes a long way towards boosting decision making because they enhance the effectiveness with which information is gathered as well as applied across different contexts. In addition to decision making, the role of management information systems in a business organization can also be evaluated in terms of innovativeness.

The complex nature of information system projects necessitates the use of multifaceted and relatively quick decision-making processes. During this process, various management skills

play a critical role in facilitating communication, client consultation, process monitoring, critical assessment, client acceptance, environmental events, troubleshooting, staff recruitment, urgency, and business executive support. Scholars have documented these requirements in studies exploring the subject of project management and asserted their wide application in the field of information systems (Hertrich & Badan, 2015). In spite of this knowledge, the project manager is mainly responsible for project success since the experience, skills, and knowledge of this professional are important determinants of project success (Janet, 2015). Importantly, other factors such the relevant management relationships, the distribution of corporate power, and the location and continuity of this expert. These important managerial and environmental requirements greatly influence project completion, although factors that can be attributed to the project manager are more influential in leading to the success of information system project.

This discussion demonstrates that specific environments, requirements, and events significantly contribute to or may detrimentally affect the completion and success of information system projects. However, these requirements often change based on the project (Morris & Jabart, 2015). Furthermore, the type of environment necessary for implementing the project, the techniques employed for project implementation, and the manner in which the running of an information systems project occurs may greatly influence the success of information system projects. Project managers increase their skills and knowledge with experience. Thus, scholars should strive to gain insight into the challenges experienced by these expert professionals during information system projects since this subject may foster project success.

Besides the abilities of the project manager, the experience and expertise of all members of the project team and other concerned organizations or persons facilitate the success of an information system project. However, it is exceedingly challenging to maintain the tacit experience of the project stakeholders. Moreover, the project personnel can be dismissed at the culmination of information system or redeployed to similar projects (Dismas, 2015). For this reason, the success of these projects can be attained if continuity of project management occurs across information system projects. This process can be accomplished once the experience and expertise of project managers are maintained and effectively exploited across the portfolio of information system projects. Thus, these professionals can attain excellence after managing several information system projects effectively over a lengthy period. For this reason, it is essential to assess the factors that might affect the implementation of information system by project managers.

There are other technicalities that comprise the implementation blueprint, which might not necessarily be addressed effectively. Thus, the overall process of implementing management information systems is compromised if technicalities are not actualized accordingly (Tanja & Borka, 2012). For instance, the issue of change management is a notable barrier that characterizes the implementation process of management information systems in the business world. In the event that the workforce in a company is not supportive of the change process, then it becomes massively complex for the expected outcomes to be achieved in the short-term as well as in the long-term. Additionally, the issue of maintaining the MIS framework is also a notable shortcoming or challenge associated with the implementation of management

information systems in a business organization. The specific problem is that companies experience challenges when trying to align management information systems into their operational systems.

Statement of the Problem

The problem to be addressed by this study is the factors that affect the successful implementation of information system projects. It is notable that the use of management information systems in business organizations is characterized by numerous beneficial implications in the short-term as well as in the long-term (Paterson, 2012). Accordingly, many firms continue to implement information system and reorganize their corporate processes. Information technology greatly influences computer-based information system; thus, the effectiveness of information technology to support institutional strategies is an important predictor of successful information system. There is a high demand for effective use of information technology (Harley, 2015). Companies must consider the issues related to the establishment of effective implementation of information technology. In fact, a significant proportion of implementation projects concerning enterprise resource planning system fail. Consequently, it is important to understand the key success factors and barriers related to the implementation of information system. This process is vital since adopting information system is amongst the core factors that enhance the effectiveness of an enterprise.

Importantly, most businesses are faced with numerous problems related to the implementation of information systems. One of the main challenges of implementing management information systems pertains to cost issues. Most businesses consider the

implementation process as being immensely expensive because of the high costs involved (Pai, 2012). However, one of the main causes of high costs of implementing management information systems pertains to the issue of selecting the relevant components of information technology in line with the distinctive needs and requirements of a business. In the event that the implementation framework is not aligned towards the distinctive needs of the company, then it is massively complex for the business to implement an effective system. In addition to cost issues, another notable challenge associated with the implementation of management information systems in a business pertains to technical requirements.

Purpose of the Study

The purpose of this qualitative, case study research is to present and describe management information systems implementation challenges and assess the factors that help in the achievement of successful implementation. Thus, the intent is to identify the specific ways in which the barriers of implementing management information systems in business organizations can be addressed. This goal will be achieved through the evaluation of best practices in successful business organizations while also integrating theoretical frameworks proposed in current and past studies on the issue. Additionally, the factors influencing the effectiveness with which the challenges of implementing management information systems can be addressed in the short-term and the long-term will be addressed. This study will be accomplished by interviewing project managers of a firm located in San Diego, California.

Theoretical Framework

The theory of change management will act as the guiding framework for this research. In particular, this theory will be employed because the implementation of management information systems into the operational framework of a business organization cannot be attained effectively if the management does not align it towards an effective change process. The advocates of this theory maintain that achieving effective change management requires a firm to focus on five core steps: motivating change, developing a vision, soliciting support, managing the transition, and sustaining momentum. Over the years, some business organizations have been unsuccessful in the alignment of management information systems into their respective systems because they have not adequately focused on the development of an effective blueprint for change management (Martia, 2015). For this reason, there is the need to evaluate the various ways in which the change management theory will help in addressing the purpose of this study. The use of change management theory in the actualization of management information systems in an organization is vital because it will play a critical role in ensuring that the relevant resources are identified for the purpose of enhancing how such systems contribute towards operational efficiency. Management information system can only be implemented successfully in the event that the different leaders are adequately supportive of the change process.

Nature of the Study

A qualitative, case study design will be adopted to assess the factors that adversely impact the implementation of management information system. The motivation for conducting this research is to understand the views of professionals who have the necessary experience in

managing information system projects. A qualitative research was selected since it would help to gain rich data regarding the experience of project managers. The goal of this study is not to investigate an entity; rather, the intent is to gain insight into the viewpoints, actions, and lived experience of information system project managers various firms in San Diego, California. Case study design focuses on investigating, observing, and understanding processes and specific groups over a specified period (Friedrich, 2014). An investigators conducts this form of research by exploring the phenomenon of interest by temporary observing or participating in the environment. This process helps in comprehending the contextual environment that is pertinent to the research subject. An important feature of a case study design is the depth of research. The purpose of the study and the developed research questions required gaining insight into the lived experiences of professionals involved in project management. Thus, it will be interesting to complete a case study on this subject by focusing on various projects within enterprises to understand the challenges faced by project managers. Case study is the appropriate method to complete this study since it is aligned the created research questions.

Research Questions

1. What is the role played by management information systems in a business organization?
2. What challenges are encountered in management information system implementation processes?
3. What factors can facilitate the achievement of a successful management information system implementation?

Significance of the Study

Relatively few researchers have completed comprehensive research on the factors that affect the success of management information system. Thus, scholars currently have a high interest in this discipline that deserves further research. The intent of this study is to fill gaps in the literature by assessing further the barriers to the implementation of management information system. The outcomes of the study will be vital in terms of enhancing the performance and overall productivity of business organizations. This is due to the fact that the integration of management information systems in business organizations facilitate for improved decision making and hence the attainment of success not only in the short-term but also in the long-term (Ellis & Levy, 2012). Additionally, the study will help in determining the specific roles of the different stakeholders involved in the implementation of management information systems in business organizations. The study will also be essential in terms of facilitating for the development of nexus between modern technological platforms and business performance.

Definition of Key Terms

Effects. Effects refer to phenomena that follow and are attributed to some previous occurrences (Padaka, Lei, & Merk, 2016). The effects arising from the implementation of management information system and the manner in which these implications affect firms and corporate processes will be the main focus of this research.

Key Issues for Management Information System Implementation. The key issues for management information system implementation denote the "success factors," that is, the factors that require the necessary attention to ensure a successful implementation of management

information system (James & Brenda, 2015). The successful performance of these factors is responsible for the success of an enterprise and the achievement of corporate goals.

Management Information System Implementation. Management information system is an essential component of the information system development process that plays a critical role in delivering the information system into its field or context of use (James & Brenda, 2015).

Management Information System. Management information system denotes an information system that facilitates the making of effective and timely business decisions necessary for accomplishing corporate goals (James & Brenda, 2015). It is often used interchangeably with the term information system.

Summary

Project management is valuable in the domain of information systems because projects in this area are related to diverse technical, human, and business issues. However, information system projects are usually expensive and risky, making it essential to focus on these crucial projects since they can influence the success of companies. The multifaceted nature of information system projects makes it essential to employ multidimensional and relatively quick decision-making processes. Thus, specific environments, requirements, and events significantly facilitate or adversely affect the completion and success of information system projects. For instance, the competencies of the project manager and the experience and expertise of other members of the project team and other concerned organizations or persons may play a critical role in facilitating the success of an information system project.

The problem to be addressed by this research is the factors that hinder the successful implementation of information system projects. Consequently, the purpose of the study is to present and explain management information systems implementation challenges and describe the factors that are responsible for the achievement of successful implementation. A qualitative, case study design will be used to assess the factors that limit the implementation of management information systems. This methodology was selected since the intent of this research is to gain insight into the views of professionals who have the relevant experience in managing information system projects. Qualitative research was selected because it would help to obtain rich data concerning the experience of project managers. Furthermore, case study design helps a researcher to investigate, observe, and comprehend processes and the selected groups over a specified period. Thus, it will be relevant to this study since it is consistent with the purpose of the investigation and the developed research questions that focus on the lived experiences of specialists involved in project management.

This qualitative, case study research will be completed within enterprises located in San Diego, California to recognize the challenges faced by project managers based on three core research questions: What is the role played by management information systems in a business organization? What challenges are encountered in management information system implementation processes? What factors can facilitate the achievement of a successful management information system implementation? This study is important because relatively few investigators have completed comprehensive studies on the factors that hinder the success of management information systems. For this reason, scholars are keen on understanding this

discipline, making it essential to complete further research. Consequently, gaps in the literature will be addressed by gaining insight into the barriers to the implementation of management information systems.

Chapter 2: Literature Review

Geographically, a program is or may be meant to cover large regions and/or large communities with varying backgrounds. As the program environment is always dynamic, program planners cover differentiated and dynamic problems. Project planning is therefore a dynamic and flexible process and majorly involves managing projects. In planning a program to reduce famine in rural areas, for example, it certainly occurs that different rural areas may have differing problems in this context (Bratton, 1989). Some are arid, others facing flooding while others face crop and livestock diseases. In this case, for instance, projects that may be initiated

Will certainly be different: irrigation, flood control and crop and livestock diseases control projects may be initiated respectively. These projects, under one program, are coordinated by a program officer from a central point. Programs are not definite in terms of resource allocation

Because there is stiff competition for the available resources among various projects under the program. Therefore, before executing a program, research projects are often required at different target areas results of which may bring complications relative to available resources. Program planning and success thereof depends on the projects planning efficiency and its outcomes are largely subject to activism, government policies, staff discipline, honesty, self-criticality, sacrifice, favoritism avoidance and service delivery orientation.

Proper program planning control helps a lot in project success because the program planning personnel monitors projects and controls individual project funding (Archibald, 2003). Therefore, a program officer is the chief overseer of various projects and takes all the

responsibilities. It is known that nearly half of unmonitored projects fail in the end (Archibald, 2003). Therefore, it is safe to say that lack of proper program planning, in particular resource allocation and risk management, definitely lead to associated project's failure. In a similar way, proper project planning helps a great deal for a particular project to be successful. Project planning is closely related and comprises empirical research at grass root level which aids program planners to allocate available resources in the most appropriate manner (Archibald, 2003). If the aforementioned project planning stages are carefully and professionally addressed, related project will easily succeed. Therefore both program planning and project planning, if done properly, are a sure way of ensuring successful projects geared towards improvement of lives of the public.

Survey

Survey is one of the commonest types of strategic approaches. In essence, it involves the collection of data or information that facilitates for the identification of distinctive attributes of a given population (Whitley & Kite, 2013). This type of strategic approach is associated with various advantages. Firstly, it provides an effective platform for making statistical inferences about a given group or population. Surveys are also relatively easy to perform compared to other types of strategic approaches like content analysis. Despite such advantages, surveys are also characterized by several shortcomings. For instance, a lot of time is required to collect data from all the participants or respondents (Corbetta, 2003). The data provided by respondents in this type of strategic approach is also prone to bias.

In view of these pertinent aspects of surveys, it is vital to evaluate how such a strategic approach can be integrated into the Implementation of MIS in business organizations. In order to assess the attitudes and perceptions of stakeholders towards the emerging instruments of financial risk management, surveys can come in handy (Kothari, 2004). One-on-one interviews can be used to collect information from each respondent. Some possible questions to the stakeholders during the survey would be:

- Would you support the inclusion of emerging financial risk management instruments into the implementation phase?
- What are the potential shortcomings of using the emerging financial risk management instruments in the project?
- What are the implications of the financial risk management instruments on potential funding for the project?

Data collected from surveys can then be analyzed using statistical packages for social sciences. Such an analysis would be immensely helpful in terms of determining whether the stakeholders support the use of emerging financial risk management instruments in the project (Davis, 2006). This is a critical platform of effective decision-making. Additionally, surveys can play an excellent part towards mitigating potential conflicts among stakeholders during the project.

Causal-comparative strategic approach serves as another type of strategic approach that can be integrated or used in the Implementation of MIS in business organizations. As suggested by the name, this type of strategic approach involves an evaluation of the causes and effects of a

given condition or situation. However, causal-comparative studies are unique in that they are not based on experimental data (Whitley & Kite, 2013). The fundamental approach encompasses an evaluation of the causes and effects on a given variable. There are various ways in which this type of strategic approach can be integrated into the Implementation of MIS in business organizations. It can be used as a platform to investigate the potential causes of inadequate funding, and how that might affect the performance of the entire implementation phase.

The relevant controls must be integrated into the project in order to ensure that the causal-effects relationships are not only accurate but also reliable. For instance, it is anticipated that inadequate funding would negatively impact the implementation of all phases of the Implementation of MIS in business organizations. From another outlook, causal-comparative strategic approach can be used to evaluate the causes of negative stakeholder perceptions towards the emerging instruments of financial risk management (Stewart, 2002). Information obtained from such a study would then be used to augment the project's implementation framework. The main advantage of using this type of strategic approach in the project is that it will help in determining interactions between distinctive variables. On the other hand, causal-comparative strategic approach cannot be incorporated into the project on an experimental basis.

Experimental strategic approach refers to a study that is aimed at investigating the relationship between two or more variables. This type of strategic approach is primarily based on hypothetical formulations. In essence, this encompasses the formulation of the null and alternative hypotheses. Based on this approach, data is collected and analyzed in order to accept or disconfirm the proposed hypothesis (Paterson, 2012). There are numerous ways in which this

type of strategic approach may be integrated or used in the Implementation of MIS in business organizations.

Documentation

A strategic approach methodological framework would then be developed in order to validate or reject the aforementioned hypotheses. This framework can be based on a small experimental sample of variables and strategic approach participants. In the event that the study outcomes show a linkage between stakeholder perceptions and the implementation of the Emerging instruments of financial risk management, the null hypothesis would be upheld or accepted (Whitley & Kite, 2013). However, a different outcome would lead to the rejection of the null hypothesis and acceptance of the alternative hypothesis. The most prominent advantage of experimental strategic approach is that it is statistically significant. It is based on a comprehensive empirical analysis as opposed to theoretical estimations (Davis, 2006). In view of such attributes, the implementation framework of the Implementation of MIS in business organizations can be greatly enhanced through the use of experimental strategic approach

This type of strategic approach involves the analysis of communication material from human beings. While content analysis is not a common method of strategic approach, it can be incorporated into the implementation phase in terms of evaluating trends. For instance, it can be effective in determining previous outcomes of similar projects in the past (Otieno & Awange, 2006). Based on such an aspect, this is an excellent platform for the development of a predictive mechanism at different stages of the Implementation of MIS in business organizations.

Historical Strategic Approach

This type of strategic approach hinges on an analysis of past trends. Historical strategic approach is vital especially in terms of decision making. The implementation of the Implementation of MIS in business organizations will inevitably be characterized by various challenges. For instance, resource allocation is a likely aspect of concern I the project's implementation phase. However, historical strategic approach can be used to avert such a problem. Additionally, historical strategic approach might also entail collection of data from people who experienced such projects before (Paterson, 2012). Their insights can be helpful in the different stages of implementing the Implementation of MIS in business organizations.

The different types of strategic approaches have been evaluated in the entire paper. Emphasis has also been placed on how such platforms can be integrated into the Implementation of MIS in business organizations. Correlation strategic approach has been identified as one of the most essential methods of investigating the relationship between distinctive variables. Strong relationships between variables are characterized by positive coefficients. Experimental strategic approach is also another outstanding type of strategic approach discussed in the paper. It is largely based on the formulation of hypothesis based on the issue at hand. In the implementation phase, there are numerous variables that affect each other directly or indirectly. Experimental strategic approach can help in demystifying such relationships.

Theoretical/Conceptual Framework and the Nature of the Study

Change Management Theory

The theory of change management will serve as one of the main aspects of emphasis when it comes to this project. This is due to the fact that the implementation of management information systems into the operational framework of a business organization cannot be attained effectively in the event that it is not aligned towards an effective change process. Over the years, some business organizations have been unsuccessful in the alignment of management information systems into their respective systems because they have not adequately focused on the development of an effective blueprint for change management. In line with this stipulation, there is the need to evaluate the various ways in which the change management theory will come in handy as far as this study is concerned.

Firstly, the use of change management theory in the actualization of management information systems in an organization is vital because it goes a very long way towards ensuring that the relevant resources are identified for the purpose of enhancing how such systems contribute towards operational efficiency. Change cannot be achieved in the event that there are inadequate resources' set aside for the same. This not only applies to the short-term, but also to the long-term (Gianfranco, 2012). Using change management theory ensures that a highly effective mechanism is identified so as the overall change process is supported by adequate resources. In addition to resource management, another notable way in which the theory of change management will be vital in the study pertains to the identification of the various

stumbling blocks of change within an organization as far as the implementation of management information systems is concerned.

It is massively complex for any organization to successful implement management information systems in the event that the various stumbling blocks of change are not identified. Some of the potential stumbling blocks of change include untrained staff, negative attitudes, poor planning, ineffectual compensation and ineffectual working conditions among others. These issues must always be addressed effectively so as to ensure that the overall blueprint of implementing management information systems is successful in the short-term as well as in the long-term. Some barriers of change can be addressed using simplified mechanisms and strategies. On the other hand, addressing other aspects of barriers require extensive interventional systems that are based on extensive planning. These stipulations are indicative of the fact that the theory of change management will be massively beneficial towards the success of the study.

From another perspective, the role of the theory of change management in the project can be highlighted in terms of the part it plays in the enhancement of stakeholder involvement. In any business organization, the different components of management information systems cannot be implemented successfully unless the various stakeholders are involved. This not only applies to the influential leaders, but also other employees. For instance, there is always the need for employees of a business organization to be trained on how they can use management information systems in decision making. In line with this stipulation, it then follows that the conceptual framework of change management will come in handy as far as the implementation of management information systems is concerned. The role of the conceptual framework of change

management in the study can also be evaluated in terms of enhancing the attitudes of leaders towards the integration of MIS into their respective organizations (Gay & Weaver, 2011).

MIS systems can only be implemented successfully in the event that the different leaders are adequately supportive of the change process. While some business leaders have desirable perceptions and attitudes towards the change processes others are more or less skeptical. Such aspects can have extensive implications on how the business implements or aligns MIS into its operational systems. In line with this stipulation, changing the attitude or perception of leaders towards MIS is massively beneficial. The alignment of the conceptual framework of change management will go a very long way towards enhancing such an aspect.

The conceptual framework of change management will also be vital when it comes to decision making processes within a business organization as it implements and develops systems for MIS systems. Over the years, some organizations have not benefited adequately from MIS systems because they have not implemented such mechanisms in line with the required blueprints of decision making. Despite the fact that there are numerous ways in which decision making can be enhanced within an organization, the use of the conceptual framework of change management is among the best approaches.

Conflict Theory

In addition to the conceptual framework of change management, another theoretical blueprint that will come in handy in this study pertains to the conflict theory. Conflict theory is a concept that serves as platforms on which conflicts are not only identified and resolved, but also prevented from occurring in the frits place. While some business organizations are characterized

by excellent standards of operational effacing, they are not effective when it comes to the management and handling of conflicts. Such aspects can have negative implications when it comes to the implementation of MIS. In line with this stipulation, the conflict theory will come in handy as a mechanism on which the issue can be evaluated systematically (Gelso, 2006).

Over the years, conflict theories have been used effectively in the enhancements of how change is implemented in an organization. For instance, this theory can be massively beneficial when it comes to the mitigation of arguments among influential stakeholders when MIS is being implemented in a business organization. Additionally, this theory can be effective as far as the enhancement of strategic planning is concerned. In the event that conflicts are not addressed accordingly, it can be complex for business organizations to benefit from MIS.

Methodology

The research method that will be used within the framework of this study pertains to quantitative analysis. One of the main beneficial implications of using a quantitative analysis is that it will serve as a beneficial platform for the enhancement of the overall standard of research validity. When a study is aligned towards a framework of empirical analysis, the overall level or standard of validity is enhanced extensively.

The different phases of planning processes in both cases are quite similar. For example, the concept of scope of a project is similar to scope of a program but there certainly are differences in complexity of timing, scheduling and costs. In project planning, scopes, schedules, objectives, goals and budgets are a common characteristic (Kerzner, 2013). Projects are accomplished through deployment of required resources that are definitely quantified such that

deadlines and costs are usual. For this reason, and because a project works with restrained resources, monitoring at every stage of planning is necessary. Every major project planning involves many of the following stages: identification; preparation; appraisal; presentation; implementation; monitoring; and evaluation. Identification is the process of identifying the best idea and/or solution to a perceived problem out of many ideas or solutions. Once the idea is clearly defined, the team involved carefully reviews the idea and develops it to the appraisal stage. During appraisal stage, the idea is split into its many aspects which are systematically and comprehensively analyzed. This is where the project plan is carefully and objectively developed ready for presentation to financiers. Then such a plan is presented to relevant financiers to be approved.

A project plan must include vital aspects of resource economics, time frame, outcomes projection, and justification among others. Upon approval, the project must be implemented. Monitoring is closely done at every stage and this includes assessing the implementation process as per the initial project plan. After the project is implemented, the whole project must be reassessed or evaluated to measure its efficiency and outcomes (Kerzner, 2013).

Although similar, program planning is complex because it takes care of many projects. The existence of many projects in a program implies that a program deals with multiple disciplines (Archibald, 2003). Therefore, a program planner(s) must be able to plan for multiple projects simultaneously. The outcomes of such a program are mostly intangible because programs are lengthy and can go up to six years or more depending on the nature of a program. Another reason for intangibility of outcomes is that, due to a programs lengthy time and multiple

projects, programs occur in dynamic environments such that the desired outcomes may turn inappropriate. Related to this is the fact that programs involve so many different stakeholders with varying views (Bratton, 1989; Archibald, 2003). Geographically, a program is or may be meant to cover large regions and/or large communities with varying backgrounds. As the program environment is always dynamic, program planners cover differentiated and dynamic problems. Project planning is therefore a dynamic and flexible process and majorly involves managing projects. In planning a program to reduce famine in rural areas, for example, it certainly occurs that different rural areas may have differing problems in this context (Bratton, 1989). Some are arid, others facing flooding while others face crop and livestock diseases. In this case, for instance, projects that may be initiated will certainly be different: irrigation, flood control and crop and livestock diseases control projects may be initiated respectively. These projects, under one program, are coordinated by a program officer from a central point. Programs are not definite in terms of resource allocation because there is stiff competition for the available resources among various projects under the program. Therefore, before executing a program, research projects are often required at different target areas results of which may bring complications relative to available resources. Program planning and success thereof depends on the projects planning efficiency and its outcomes are largely subject to activism, government policies, staff discipline, honesty, self-criticality, sacrifice, favoritism avoidance and service delivery orientation.

Proper program planning control helps a lot in project success because the program planning personnel monitors projects and controls individual project funding (Archibald, 2003).

Therefore, a program officer is the chief overseer of various projects and takes all the responsibilities. It is known that nearly half of unmonitored projects fail in the end (Archibald, 2003). Therefore, it is safe to say that lack of proper program planning, in particular resource allocation and risk management, definitely lead to associated project's failure. In a similar way, proper project planning helps a great deal for a particular project to be successful. Project planning is closely related and comprises empirical research at grass root level which aids program planners to allocate available resources in the most appropriate manner (Archibald, 2003). If the aforementioned project planning stages are carefully and professionally addressed, related project will easily succeed. Therefore both program planning and project planning, if done properly, are a sure way of ensuring successful projects geared towards improvement of lives of the public.

Qualitative Strategic approach

Qualitative strategic approach focuses on non-empirical analysis of variables. This technique is highly effective when investigating behaviour or perceptions. While most types of strategic approach are characterized by predictive outcomes, the results of qualitative strategic approach are strongly descriptive (Kothari, 2004). Based on these characteristics, qualitative strategic approach can be incorporated excellently into the Implementation of MIS in business organizations. In the case study, the main aspect of focus is an assessment of stakeholder perceptions towards the emerging instruments of financial risk management. This implies that there is the need to investigate the attitudes of stakeholders towards the aforementioned instruments. Interviews can be used as excellent platforms for data collection based on a

qualitative methodological framework. Following are potential interview questions for data collection among the different stakeholders of the implementation phase:

- Do you know any of the emerging instruments for financial risk management?
- How effectively might these instruments impact the implementation phase?
- Are there better alternatives for financial risk management for the Implementation of MIS in business organizations?
- Do you this risk management is a critical factor towards the overall success of the Implementation of MIS in business organizations?

The sample interview questions are open-ended. This implies that it is extremely complex to predict the answers from each respondent. In view of such an attribute, the descriptiveness of qualitative strategic approach is evident (Corbetta, 2003). Based on such a framework of data collection, it would also be possible to make effective decisions with regard to the actualization of the emerging instruments.

Summary

Correlation strategic approach tests for statistical relationships between two variables. In a similar approach to experimental strategic approach, correlation strategic approach can be based on hypothesis testing. The hypothetical formulation is based on the potential or anticipated linkages between the various variables under investigation. Despite this similarity, correlation strategic approach is different from experimental strategic approach in terms of coefficients. The latter does not involve coefficient as opposed to the former type of strategic approach. There are three main types of correlation coefficients. These are the positive, negative and inverse

coefficients (Stewart, 2002). Strong relationships between variables are characterized by positive coefficients. In essence, positive coefficients are equal to or close to 1.00. Weak relationships between variables are characterized by negative coefficients. Ideally, negative coefficients are close to .00.

On the other hand, inverse relationships between variables are characterized by coefficients that are close to -1.00. Based on these perspectives, it is massively pertinent to highlight the various ways in which correlation strategic approach can be incorporated into the Implementation of MIS in business organizations. Perceptions of stakeholders can impact the implementation of the emerging instruments of financial risk management into the implementation phase (Whitley & Kite, 2013). If the perceptions of stakeholders are minimally influential on the adoption of the emerging instruments, the correlation coefficient will be close to .00. This can also be termed as negative correlation. In contrast, if the adoption of such instruments into the implementation phase is strongly effected by stakeholder perceptions, the correlation coefficient will be close to 1.00. This can also be termed as positive correlation.

Chapter 3: Research Method

Project management is widely applied in addressing many corporate challenges. However, specific environments, requirements, and events significantly impact or detrimentally affect the successful completion of information system projects. These requirements usually change based on the project (Morris & Jabart, 2015). Moreover, the type of environment necessary for executing the project, the procedures employed during the project implementation, and the manner in which the operation of an information systems project occurs are important determinants of the success of information system projects. Additionally, information system projects are typically capital-intensive and risky, making it essential to focus on the factors that affect the success of these important projects since they can be highly valuable to companies (Bor & Kiptum, 2017). Consequently, assessing the factors that might affect the implementation of information systems by project managers is vital. Thus, the problem to be addressed by this study is the factors that influence the successful implementation of information system projects. In particular, the purpose of this qualitative, case study research is to present and describe management information systems implementation challenges and assess the factors that help in the achievement of successful implementation.

This study will be conducted by interviewing project managers of a firm located in San Diego, California. A qualitative, case study design will be adopted to assess the factors that adversely impact the implementation of management information systems. This chapter includes a discussion of the research methodology and design. The research design, population and sample, materials, the study procedures, and the data collection and analysis are described in the

chapter. Furthermore, the research assumptions, limitations, and delimitations are included in this section. The chapter culminates with a description of ethical assurances and a summary of the key points.

Research Methods and Design

The aim of this qualitative, case study research is to describe management information systems implementation challenges and assess the factors that help in the achievement of successful implementation, rather than statistically explore causal relationships. For this reason, the qualitative method is the most suitable method (Sutton & Austin, 2015). This method is relevant to studies conducted to explore the manner in which the group under investigation makes sense of its experiences. A case study research design is appropriate to help in understanding a phenomenon of interest within a specific context. An investigator can employ a mixed, qualitative, or quantitative research method while completing a study (Gentles, Charles, Nicholas, Ploeg, & McKibbon, 2016). The person has to consider the research problem as the basis for selecting the most appropriate research method and design. A qualitative research method was adopted to explore the problems affecting the implementation of management information systems implementation in the United States. Individuals who employ qualitative research strive to provide a description of social phenomena and gain insight into the world in which people live and the reason things exist in a specific way (Grossoehme, 2014). The focus of this approach is the social aspects related to the world and the provision of relevant answers to questions regarding the reasons people develop attitudes, beliefs, and viewpoints and adopt a particular behavior. It was important to get answers to the developed research question by

gaining a comprehensive knowledge of the subject through open-ended questioning and face-to-face interviews, a factor that contributed to the utilization of the qualitative approach.

In quantitative research, an investigator applies arithmetic logic to the selected variable as a way of assessing causal relationships or establishing the validity of a theory. The purpose of the present research is to the factors that affect the successful implementation of information system projects; thus, it does not require an investigator to quantify and analyze research factors. Importantly, mixed methods research necessitates a scholar to study a phenomenon of interest through the adoption of both qualitative and quantitative methods (Wisdom, Cavaleri, Onwuegbuzie, & Green, 2011). This research method is highly appropriate when the use of a single method may provide insufficient information about the study topic. However, the utilization of qualitative approach is sufficient to adequately answer the research question and address the aim of the study. Thus, mixed and quantitative research methods were not used since they were not appropriate for the research.

Research Design

A qualitative case study approach was selected to complete this study. This technique provides tools necessary for understanding complex phenomena of interest within their contexts (Sutton & Austin, 2015). It supports the study of a specific subject and facilitates the analysis and description of the issue under investigation within a specific context. For this reason, this research design will support the purpose of the study by enabling the exploration of the challenges encountered in the process of implementing management information systems. In case studies, a person strives to characterize phenomena under investigation based on the

feedback of the research subjects and interpret the data gathered from a wide variety of sources to understand the phenomena (Alpi & Evans, 2019). Consequently, a case study design was chosen to assess the factors that hinder the implementation of management information systems in California.

Other research designs were not selected since they could not enable the researcher to gain rich data necessary for supporting the assessment and description required to complete the study. The use of a phenomenological design has the potential to enable the investigator to gather relevant data from interviews. However, it would not provide an opportunity for the investigator to obtain relevant information from other sources. Moreover, grounded theory research design is appropriate for designing a theory, which is not consistent with the study purpose of carrying out comprehensive case analysis (Foley & Timonen, 2014). Furthermore, the focus of ethnographic study design is to assess the practices, attitudes, and beliefs of culture-sharing groups, but this did not constitute the aim of the present research.

Population and Sample

For the current study, the target population is the project managers of a firm located in San Diego, California. Purposeful sampling was used to select the target population. Scholars employ different methods to access subjects for a study, including meeting business administrators or owners, visiting the selected research site, or using public directories to inform the targeted person of the aim and potential benefits of the study. A midsize firm in San Diego will be identified through the use of a directory. Subsequently, the investigator will contact the owners of the enterprises to discuss the study and seek written permission to complete the

research within the institution and have a close interaction with workers who can take part in the study. The owner of the organizations will provide names of potential subjects, give their contact details, and initiate the necessary introductions.

Purposeful sampling methods are appropriate when a person wants to narrow the selected populations. This approach is not appropriate for research that encompasses multiple case studies; rather, it is consistent with the purpose of single case studies completed (Ishak & Abu Bakar, 2014). During this process, individuals with the required knowledge will offer invaluable insight into the topic under investigation as a means of comprehensively addressing the research question. For the present research, subjects will be chosen purposefully based on their knowledge and experience in implementing management information system projects. The volunteers must have successfully completed previous projects within the set budget and deadline. Individuals conducting qualitative research usually include small sample size, while those completing a quantitative study use a relatively large sample of subjects to ensure that the results of the investigation are statistically significant. Scholars assert the need to avoid the use of a large sample size while conducting qualitative research since the approach may hinder deep, case-oriented analysis (Vasileiou, Barnett, Thorpe, & Young, 2018). A case study can encompass between one and eight subjects (Powell et al., 2013). Similarly, purposeful sampling will be employed to narrow the selected population to seven.

Data saturation is an important factor while conducting qualitative case studies based on the need to have adequate knowledge of different themes. It occurs when the provided data fails to add new codes or themes, thereby indicating that the scholar has received accurate and

adequate information about the topic under investigation and demonstrating that the obtained data reflects the views of the respondents (Saunders et al., 2017). This process will be achieved by completing initial interviews with the subjects and analyzing the obtained data for relevant themes and patterns. Subsequently, these individuals will be re-engaged in member checking to verify the information and gain more knowledge. This process will be repeated until the researcher cannot identify new codes, patterns, or themes.

A person conducting qualitative research should take part in member checking. This process helps in ensuring qualitative validity (Davis, Howk, Spurlock, McGinnis, Cohen, & Fagnan, 2017). Likewise, member checking will be completed by allowing the interviewees to review their responses. The responses of the respondents will be examined and interpreted separately to ensure that the researcher obtains accurate information about their perspectives. The respondents will receive an invaluable opportunity to give careful consideration to their feedback, provide relevant feedback, and accept their responses. The investigator will strive to avoid pitfalls related to the premature interpretation of participant feedback by addressing personal biases, gaining a comprehensive insight into the respondent responses, and promoting rigor.

Seeking subjects with the necessary experience in project management is essential. Respondents should have detailed knowledge of the research and the skills necessary for ensuring effective completion of projects (Sargeant, 2014). Consequently, the eligibility criteria for the proposed research require all subjects to have a track record of successfully completing management information system projects within the set timeline and budget, have at least 18

years, and be project managers with three years' experience. The investigator will ensure that the respondents have sufficient knowledge of the critical success factors related to project management and the process of enhancing performance on management information system projects. The subjects will share their experiences of successful project implementation with a keen focus on techniques, abilities, and skills. The interviews will be conducted in a quiet and comfortable location.

Materials/Instrumentation

The researcher will be the primary instrument for gathering the relevant research data since the person will carry out a qualitative study (Pezalla, Pettigrew, & Miller-Day, 2015). The person will utilize semi-structured interview protocol with open-ended questions to obtain the appropriate research data focusing on the respondents' perceptions, experiences, and views of management information system implementation strategies, consistent with the interview protocol. The investigator will make observations and seek data from the corporate documents, such as program implementation guidelines, standard operating procedures, and policy documents, to complement the interviews. This process of triangulating data from a wide variety of sources will maximize the reliability of the study. Furthermore, an observational protocol will be employed to observe the body language of the respondents as they provide feedback to the interview questions.

The researcher will send an e-mail to the potential respondents following Institutional Review Board approval, providing a document with information about the purpose of the research and a copy of the consent form. Volunteers who will agree to take part in the study will

sign the informed consent form, and the investigator will collect the document from each willing person. The investigator will organize the location, date, and time of conducting interviews after agreeing with each consenting person. An interview protocol with open-ended questions will guide the interview process. The utilization of the semi-structured interview protocol will help the investigator to tailor the interviews to every subject's explanation (Maggio, Moorhead, & Willinsky, 2016). Each interview session will take approximately 45 minutes. The research volunteers will describe their experiences with management information system implementation strategies. Two senior managers will take part in a pilot study to determine the reliability and relevance of the interview protocol and questions before carrying out the interviews with the selected participants. For this reason, conducting a pilot study and member-checking (that is, respondent validation involving the sharing of responses and key research findings with the volunteers) will play an important role in improving the validity of the research.

Study Procedures

While carrying out qualitative case study research, a person usually conducts interviews as the key methods of obtaining the relevant research data. Interviews will be the primary means of collecting data in the present research, complemented by data derived from observations in the workplace and the relevant enterprise documents as a means of ensuring methodological triangulation. Direct observation is a widely-applied systematic method of gathering data, where an investigator employs his or her senses to examine the population of interest in natural settings (Sutton & Austin, 2015). This important process of methodological triangulation will play an essential role in enhancing the analysis of the research data. The investigator will obtain approval

from the Institutional Review Board and permission from the management of the selected company before commencing data collection. Later, the researcher will receive informed consent from every person who will volunteer to take part in the research before engaging in the data collection process.

The researcher will provide potential subjects with informed consent forms to encourage them to take part in the research. The respondent will return their signed consent forms within a week. Each semi-structured interview session will take about 45 minutes. A selection of relevant interview questions will be adapted from previous research exploring the implementation of management information systems or similar projects. These studies will provide expert questions for use in the proposed study, thereby ensuring the credibility and reliability of the research instruments. It is important to establish an appropriate interview setting during the planning process since the location can have a considerable impact on the comfort of the subjects and affect the manner in which these individuals respond to the interview questions. A meeting room within an institution can be an appropriate setting to carry out one-on-one interviews. Consequently, a private meeting room within the selected firm will be used to interview the volunteers. An iPhone will be utilized as the main means of audio-recording the participants. The smartphone will enable the investigator to get a high-quality digital recording of the volunteers' responses (Chandrappa, Nagaraj, Vasudevan, Nagaraj, Jagadish, & Shah, 2017). The researcher will use an Olympus digital recorder device in case it is necessary to have a backup digital recording device. The person will record written notes while conducting the open-ended interviews as a means of documenting observations of occurrences, distractions, or language that

will not be included in the audio recording, a process that will play a critical role in enabling the investigator to understand the subjects' emotional state in the course of the interviews.

The researcher will seek the permission of the owner of the selected firm to gain access to the relevant corporate documents, especially the records on the successful implementation of management information system projects. Such secondary sources of information may provide invaluable, detailed information on management information system projects that will be significant to the proposed research (Cleland, 2017). The process of gathering the relevant data evidence will augment the interview. The semi-structured interview will have questions to solicit thorough responses from the subjects as a means of enabling the investigator to gain insight into the barriers related to the implementation of management information system projects.

Data Collection and Analysis

Data Collection Technique

Interviews that will last approximately 45 minutes will be conducted at a site, date, and time chosen by the researcher and the subject. Semi-structured questions that will be based on an interview protocol will be administered to the participants. Semi-structured interviews will provide an invaluable opportunity for the subjects to offer comprehensive responses, while the interview protocol will enable the investigator to seek the respondents' views of the same interview questions which will follow a similar order (Maggio, Moorhead, & Willinsky, 2016). Data from observations and institutional documents will support the one obtained from interviewing the participants. While interviewing the volunteers, the researcher will exhibit a neutral expression and manner when taking notes or soliciting a response. The person will

continuously monitor the interview process and time to increase the level of efficiency and minimize redundancy. Upon soliciting the consent of the volunteers, the investigator will audio-record the participant responses and note down important comments and nonverbal expressions of the subjects.

The investigator will conduct a pilot study after Northcentral University's IRB provides approval. Two managers who offer their services in the midsize company setting will take part in this initial research. This process will enhance the efficiency and quality of the main research by ensuring that the interview questions are clear and feasible to generate relevant data for the research (In, 2017). Subsequently, the researcher will discuss the research questions with individuals who will engage in the pilot study to establish the relevance to the problem statement and the research purpose, clarity, and ease of comprehension. Data for the study will be gathered after giving careful consideration to the feedback from administrators who take part in the pilot study. During this process, the researcher will establish close interaction with the potential subjects over the phone, through electronic mail, or in person. The person will make formal introductions to the prospective participants, provide comprehensive information about the aim of the study, and deliver the informed consent. Follow-ups will be conducted to clarify interview questions to make it possible for the volunteers to comprehend the aim of the research.

Every interview session will be audio recorded after receiving consent from the subjects, a process that will be completed before transcribing the interviews. This approach will provide an opportunity for conducting a comprehensive analysis of the volunteers' responses and quoting participant statements verbatim when necessary. Following the transcription of all interviews, the

written records and interview interpretations will be delivered to the subjects for member checking, review, and verification prior to the analysis of the research data. Member checking will improve the trustworthiness and credibility of the obtained data (Davis, Howk, Spurlock, McGinnis, Cohen, & Fagnan, 2017). The review and feedback from the subjects will increase the accuracy of the researcher's interpretation.

Data Analysis

A comprehensive analysis of the interview data can help in getting an accurate interpretation of the subjects' views and experiences. The use of a relevant theoretical framework and a wide variety of data sources, as well as triangulation and in-depth analysis of interview data, are important features of case study research (Hyett & Dickson-Swift, 2014). There are several strategies of triangulating research data, including theoretical, data, methodological, and investigator triangulation (Fusch, Fusch, & Ness, 2018). Firstly, theoretical triangulation encompasses the utilization of at least two theoretical positions while conducting data interpretation. Secondly, data triangulation is an approach of gathering the relevant research data using a wide variety of sampling strategies. Thirdly, methodological triangulation requires the researcher to employ two or more avenues to obtain research data. Lastly, investigator triangulation occurs when two or more investigators gather and interpret the research data. In the proposed research, data will be obtained from two major sources: one-on-one interviews with project leaders and company documentation related to the implementation of management information systems. The researcher will ensure that data analysis is related to the information

obtained from enterprise documentation, key themes from the respondents' interview data, and information derived from a review of the literature.

The process of data analysis will be based on Yin's five-step interview protocol. This approach will provide an opportunity to identify strategies employed by project managers to successfully plan and effectively execute management information system projects within the set timeline and budget. During this process, the subjects' experiences are described to provide insight into the issue of interest in a real-life setting (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). Thus, the investigator will review and analyze the transcription of the enterprise documentation, reflective journal summaries, and interviews to understand, identify, and categorize research themes and patterns concerning techniques used by project managers to ensure successful planning and completion of management information system projects. The interview protocol will include compiling, disassembling, reassembling, interpreting, and concluding (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). The investigator will utilize NVivo to upload the relevant documents and iPhone audio recordings.

Compiling

Data compilation will occur before commencing the analysis process. This approach will involve the review of enterprise documents, the collection of relevant data from interviews with the project manager, the transcription of all interviews, and the coding of the generated transcripts. It is important to record data observations and assess promising themes and patterns in the raw data (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). Thus, the investigator will take

notes about subjects' completeness of their feedback, reluctance to answer questions, nonverbal reactions to the interview questions, and demeanor during the interview.

Disassembling

Individuals conducting qualitative research disassemble the obtained research data into fragments and label and code it. Later, they reorganize the research data into themes and identify key patterns (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). This process will be used during data analysis. Moreover, the researcher will alphanumerically code the subjects using Roman numerals, with the term "subject" preceding it.

Reassembling

Qualitative investigators reassemble research data, a process that encompasses clustering and grouping it into appropriate categories (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). This process will be completed using NVivo. The software will help to code data, categorize related themes, compare trends in the research data, and organize the obtained data to facilitate interpretation.

Interpreting

It is important to conduct the interpretation of research data by identifying and categorizing themes based on the research purpose. Moreover, investigators analyze primary and secondary sources of data to identify and compare themes and patterns and offer a detailed descriptive interpretation (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). Similarly, the researcher will examine and sort themes within the research data and interpret the themes and patterns derived from the primary and secondary data. The relationship between the enterprise

documentation and interview data, the knowledge drawn from a review of the literature, and the theory of change management will be identified and interpreted. Information from scholarly research, business documents, and interview transcripts will be utilized to interpret the relevant themes based on the lens of the change management theory.

Concluding

Individuals conducting qualitative research conclude data analysis by giving a detailed description of the outcome and findings of the study (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). They link the interpretation of the important research themes and trends to the theoretical framework, the literature, the research question, and reflective notes to complete methodological triangulation. Thus, the investigator will link the enterprise documentation and interview data to the reflective notes, the developed research question, the change management theory, and the scholarly literature. The person will give an account of the outcome and the findings of the research to enlighten readers of the subject.

Role of Researcher

A qualitative researcher acts as the main instrument of gathering data (Pezalla, Pettigrew, & Miller-Day, 2015). The person must have the capacity to gather reliable and valid data after reviewing and analyzing the observation data, relevant documents, and interview transcripts. Thus, the investigator will collect and organize the research data and analyze the results. While conducting the present research, the investigator will gather secondary data from relevant corporate documents and interact with the research subjects through semi-structured interviews. The person will identify the participants for the study, seek approval from all subjects, and

interact with every volunteer in the course of the research. It is important to maintain ethical standards while conducting an investigation (Sanjari, Bahramnezhad, Fomani, Shoghi, & Cheraghi, 2014). Consequently, the interview subjects will be provided with a consent form, which they will sign to demonstrate their willingness to take part in the research. Before starting the process of collecting data, the investigator will seek the approval of the Northcentral University Institutional Review Board.

Assumptions

Assumptions represent the issues that are beyond the control of the person conducting the study. The analysis of the literature provides important assumptions about management information system projects that are central to this research. Specifically, management information system projects play an important role in ensuring the success of businesses (Babaei & Beikzad, 2014). Moreover, the culture of an institution may influence the adoption of management information system projects (Kuraesin, 2017). Additionally, the selected sample will represent the population of program managers with management information system experience (Kuraesin, 2017). It is assumed that these individuals have a significant influence on decisions related to the adoption of the management information system (Kuraesin, 2017). Furthermore, the researcher assumes that the interviewees will provide accurate answers to the interview, rather than answering based on their perception of what the investigator wants the interview questions answered (Lam, 2010).

Limitations

Limitations are the potential research weaknesses that are beyond the control of the individual carrying out the study. Several limitations may affect the findings of this research. Specifically, the researcher will limit the participants to seven, an approach that may weaken the study findings. Moreover, the person will restrict the research to a single firm located in San Diego, California, which may limit the transferability of the results for future research. Lastly, recalling information is often inaccurate; thus, the knowledge of the project managers regarding the topic under investigation and the capability to remember events related to the strategies of implementing management information system projects may be inaccurate. However, these limitations will be addressed by using subjects who have a track record of successfully executing management information system projects within the set timeline and budget and at least a three years' experience, a process that will maximize the reliability of the participant responses (Sargeant, 2014).

Delimitations

Delimitations refer to the factors that are responsible for limiting the research scope, thereby defining its boundaries (Wolgemuth, Hicks, & Agosto, 2017). These characteristics are under the scholar's control. They may encompass the choice of the population, theoretical framework, the research questions, and the study purpose. The scope of the proposed research will be a qualitative case study assessing the factors hindering the implementation of management information systems by project managers in California, U.S.A. The investigator will only consider the views of people with knowledge and experience in the planning and

implementation of management information system projects. Delimitations of the subjects will focus on their lived experiences and do not consider other characteristics such as the personality of the participant. Additionally, the location of the subjects will be restricted to San Diego, California, indicating that the findings of the study might not be generalized to other midsized firms in other parts of the country.

Ethical Assurances

Researchers should seek informed consent from individuals who participate in research before enrolling them in the study, maintain their confidentiality, and protect them from harm (Kadam, 2017). However, there are no potential risks related to participation in this study. Consequently, the potential research subjects will confirm their willingness to take an active part in the research by receiving and signing the consent form and soliciting feedback to questions related to the study purpose and requirements. The consent form will highlight the study purpose, the researcher's contact details, the potential risks, the voluntary aspect of the research, and the opportunity to withdraw from the investigation at the participants' discretion. Thus, all participants will receive the consent form and provide the signed document to the investigator within seven days. Individuals will participate in the proposed research voluntarily, with a chance to withdraw at their will without providing any explanation. They will not receive any incentive or monetary gain.

This research will be carried out upon receiving approval from the Northcentral University Institutional Review Board. Subsequently, the investigator will send an invitation letter to the prospective subjects through an electronic message describing the aim of the

research. People who will show interest in the study will receive a consent form, which they will complete prior to the commencement of the data gathering process (Kadam, 2017). During this process, the researcher will seek permission to audio-record the subjects while conducting the interview sessions. The investigator will maintain the confidentiality and privacy of the subjects by referencing their names and identities as Subject I, Subject II, and so forth.The data and information derived from this important research will be secured in a locked cabinet and on a password-enabled hard disk drive (HDD) for four years following the completion of the research. Eventually, the relevant research data and information will be destroyed.

Researchers should have knowledge of the study topic (Sargeant, 2014). Thus, the investigator selected the subject because of the person's professional experience, especially in business administration. Consequently, research bias, especially while conducting data analysis, can arise from the viewpoints, values, and experiences of the person carrying out the research. Thus, it is important to identify personal views as a way of comprehending and appreciating the interpretations of the participants. For this reason, member checking will be employed to ensure that the subjects' experiences, views, and observations become the key component for interpreting the research outcomes and findings. Specifically, the investigator will share the interpretations of the participant feedback with the subjects for validation. The researcher will note down personal feelings in the course of the data collection process, a process that will enable the person to recognize personal biases with the potential to affect interpretations. Furthermore, the investigator will exclude subjects with whom the person had a professional or personal relationship.

Summary

A qualitative, case study design will be used to evaluate the factors that hinder the implementation of management information systems. A quantitative approach was not adopted since the intent of the study is not to explore causal relationships. Thus, the qualitative method is the most suitable method since it will provide rich data. A case study design was selected because it will enable the investigator to obtain rich data essential for the completion of the study. The target population is the project managers of a firm operating in San Diego, California. The subjects will be chosen purposefully based on their knowledge and experience. These individuals will have a track record of successfully completing management information system projects within the agreed-upon timeline and budget.

The investigator will be the primary instrument for gathering relevant research data. Semi-structured interview protocol with open-ended questions will be employed to obtain the appropriate research data (Pezalla, Pettigrew, & Miller-Day, 2015). Moreover, an observational protocol will be used to observe the body language of the volunteers. However, interviews will be the principal means of obtaining data, complemented by data acquired from observations in the selected firm and the relevant enterprise documents. Each interview session, which will be audio recorded after receiving consent from the subjects, will last about 45 minutes. A pilot study will be carried out after Northcentral University's IRB approves the research, a process that will ensure that the interview questions are clear and feasible to generate relevant data for analysis.

Data analysis will be based on the information obtained from company documentation, the respondents' interview data, and a review of the literature. The process of data analysis will be conducted according to Yin's five-step interview protocol, which will encompass compiling, disassembling, reassembling, interpreting, and concluding (Whitmore, Baxter, Kaasalainen, & Ploeg, 2018). NVivo will help to upload the relevant documents and audio records. Thus, a key role of the researcher will be to collect and organize the research data and analyze the results, besides identifying the participants for the study, seeking their approval, and interacting with them. However, the small number of participants will constitute a major study limitation. Fortunately, this issue will be addressed by using project managers with a record of completing management information system projects within the set timeline and budget. The scope of the current research will be a qualitative case study research evaluating the barriers to the implementation of management information systems by project managers in California. Thus, delimitations of the subjects will center on their lived experiences, rather than their personality or related characteristics.

This research will be conducted after receiving approval from the Northcentral University Institutional Review Board. Subsequently, the researchers will seek informed consent from individuals interested in participating in the research. The investigator will maintain the confidentiality of these respondents. Furthermore, the data and information obtained from this investigation will be secured in a locked cabinet and on a password-enabled hard disk drive (HDD) for four years after the completion of the study and destroyed after that.

Chapter 4: Findings

The purpose of this qualitative study was to identify the specific barriers affecting the implementation of management information systems in business organizations and the approaches through which such MIS barriers may be addressed. To realize this goal, a set of seven research questions which form the major themes of this study were explored in detail. Respondents answered the following research questions in the interviews and survey administered during data collection. These questions acted as the principal means for identifying themes of the study and were used to form a framework from which the study was contextualized. Chapter four is largely comprised of four sections. These include the research procedure used, the trustworthiness of the data, including reliability and validity of data, results, evaluation of the results, and the summary of the findings.

RQ1. What is the role played by management information systems in a business organization?

RQ2. What is the impact of the chief executive officer in the implementation of management information systems?

RQ3. Who are the main stakeholders in the implementation of management information systems in a business organization?

RQ4. How do management information systems impact the productivity of a business organization?

RQ5. What are the barriers that stop the successful implementation of a management information system?

RQ6. What type of strategies can be used for better implementation of a management information system?

RQ7. How can management information systems be improved from time to time?

In this study, an attempt was made to analyze the reasons underlying the failures in implementing MIS. For this purpose, a qualitative research design was used. Interviews were conducted with the key stakeholders of various companies. Also, empirical evidence in secondary data sources such as research journals, and published reports were evaluated to understand the theme of the study. The research findings are based on responses to the survey instrument and from respondents using in-depth interviews. In other words, the empirical data involves the experiences of different stakeholders (managers, human resource officers, chief executive officers) in various business organizations with the implementation of management information systems.

To gain insights about the challenges faced in the implementation of management information systems, it was imperative first to get the perceptions of the business stakeholders about the use of information systems and underlying implementation processes followed in their business organizations. This further implored the respondents to identify different implementation challenges and corresponding organizational strategies to address such challenges.

Polkinghorne (2005) defined interviewing as "a technique of gathering data from humans by asking them questions and getting them to react verbally" (p.46). Kumar (2005) also noted that an interview is, "any person-to-person interaction between two or more individuals with a

specific purpose in mind and [the] purpose is to obtain descriptions of the life-world of the interviewee concerning interpreting the meaning of the described phenomena" (p.163).

Interviews were utilized in this study to obtain detailed information from the respondents. Blumberg et al. (2005) noted that interviews target all the respondents to follow their thoughts in response to the administered questions and topics of discussion. This was deemed appropriate for this research because of the many questions that have to be answered to address the increasing challenges associated with the implementation of management information systems. Also, participants have the freedom to discuss the questions in details and provide detailed responses during the interview. Merriam (2009) noted that qualitative views help to find answers regarding the perceptions of respondents about their experiences, beliefs, and reality; hence, there no great need for numerical answers to quantify these details. During the interview, each respondent was given one hour to respond to various questions. The responses were recorded in audio format to support the synthesis and scrutiny of the information and avoid future confusions.

In this study, a group of both the current and the past business executives, managers, and leaders in various business organizations across the United States were consulted. The selection of participants was generally randomized so that there are no biases in the research findings. The sample consisted of 16 managers and leaders in various organizations that used management information systems with at least three years and have at least five years of experience in decision making and leadership. Out of the 16 respondents, eight were male, and seven were female with an average age of 40.61 years participated in this research study. Also, 45% of these respondents had some technical skills such as certifications in information systems

implementation and management, while the rest had just experience in implementing management information systems in their organizations.

In terms of business leadership, 18% of the respondent were the chief executive officers of their organizations, 15% had the position of director, 35% had the position of business managers, 10% were just founders of their organizations and 22% of the respondents had the position of senior employees while the rest were not sure of their ranking in the hosting business organizations. This research did not collect data on the ethnicity or race of the participants.

The trustworthiness of the data

The reliability and validity of research are some of the key components that determine the trustworthiness or the quality of this research study. Validity which is the ability of the research instrument to measure what it is supposed to measure and reliability which is the consistency of test results by the research instruments are the key features for the valid findings of the study.

The validity of the collected data

For any research study, validity is concerned with whether the author fully studied the phenomenon that he or she supports to be studying. It can be either external or internal validity. External validity measures the degree to which the findings obtained from the measurements are in line with the reality and whether generations are possibly generated from the findings. On the other hand, the internal validity of research measures the extent to which the empirical findings match the theory. An interview guide used in this study helped in maintaining validity in this research. The interview guide backed the research questions so that the respondents provide accurate information.

For internal validity, the researcher designed interview questions with a set of open-ended questions so that the outcomes are not manipulated. Besides, the researcher was flexible and kept an open mind by listening attentively to the respondents during the discussion /interviews. One of the internal validity weaknesses noted was that some of the participants had limited knowledge of information systems implementation in their businesses; hence it was difficult to attain a high level of internal validity in the findings.

No standard questions were used for data collection. However, corporate documents such as program implementation guidelines, standard operating procedures, and policy documents were used to complement the interviews and to collect results. This process of triangulating data from a wide variety of sources maximized the validity of the study.

Therefore, it is very important for the interviewer to have an adequate level of knowledge related to the research topic. The interviewers were skilled enough to ask questions inappropriate way. They managed to maintain a non-judgmental behavior throughout the interview. A proper body language was essential because it helped the participants to answer the questions more openly and more accurately.

The reliability of the data

Saunders and Lewis (2012) noted that the reliability of research is concerned about the empirical data can be relied on up upon to generate inferences from the research study. Besides, reliability is concerned with whether the research findings can be repeated or used anywhere else for any other purpose. In Ghauri & Gronhaug (2015), reliability was used to measure the degree to which conclusions can be derived from the research and possibly repeated if the same study

was conducted elsewhere. The structured approach taken in this research study guarantees the reliability of the findings. All the views and perceptions expressed by respondents in various conversations were accurately noted, and the interviews were electronically recorded to improve on the accurateness of information. Also, the respondents were business managers and key stakeholders in various business organizations who have worked with various information systems for several years; hence, the data sources were credible enough to produce accurate and reliable findings.

The research findings obtained in this study are in line with the research objectives, the purpose, and the research questions, as indicated in chapter one of this study. These findings were gathered from the survey questionnaire, opened ended questions administered through interviews and demographics and observations. By the research questions of this study, the questions administered in interviews were thematically developed to create an opportunity for respondents to express their views and perceptions fully. Besides, interview questions acted as means of the information recording and provided a reliable structure for data collection in this study.

A purposive sampling technique was used to select the respondents for this study. Stakeholders in various companies were purposively selected and contacted. These data collection procedures involved contacting the project managers on a personal level and contacting the managers through the company's authority. Also, primary data sources such as organizational data published row data, and online databases were also utilized for data collection, especially where it was difficult to get suitable respondents. While contacting the

manager's proper permission was taken from the companies. In addition to that consent, forms were filled by the manager before being part of the study. This increases the possibility of genuine nature of participants for the study. No participant was forced to be part of the study, and neither were they forced to remain part of the study even though they want to leave the interview in between. Confidentiality was maintained so that the personal information of participants can be safeguarded properly.

Qualitative methods are relevant to studies carried out to explore how the group of participants gives meaning to their experience. Therefore, it was important to utilize this method for this study. In this method, the author considered the research problem as the basis for selecting the most appropriate research method and model. People who use qualitative research try to describe social phenomena and find out about the world in which people live and why things are specific (Grossoehme, 2014). A lot of information can be gathered by utilizing qualitative methods. Findings of the study can be generalized to several people.

Managers and other stakeholders in various organizations were systematically contacted. After getting approval from their respective authorities' emails will be sent to participants regarding the information on the topic. Questions were formulated as guidelines for the interview. This systematic way helped reproduce more accurate results. The interview has a lot of benefits, as well. First and the most important one is that the researcher can observe a lot of other things besides the factors related to the research topic. Observation of this feature can help the interviewer to rule out the impact of other factors in this study. In an interview, the researcher

can mold questions according to the situation, thus, generating more and more information regarding the topic.

Results

This section presents the responses and remarks of the participants on each of the four themes which make up the research study. In the first five questions, respondents were asked about the business value management information systems in their organizations. In all these questions, all the participants held a common perception that the implementation of management information systems in their organizations is a success factor enabling their organizations to achieve their business objectives and strategies because of the significant improvements in the business management.

At least 85% of the respondents emphasized that management information systems have to be holistically applied to address the strategic business challenges such as competition management, demand forecast, business analysis, artificial intelligence, among others. When participants were asked about the criteria and the perspectives of the information systems implementation in their business organizations, the common perspectives considered include the ability of the information systems to support and adapt business changes, the stability and the quality of information services offered to the users of such implemented management information system. Other factors that factors cited for implementation of any management information system include the ability of the system to support process optimization, improved communication, retention of organizational data, and improved multi-disciplinary collaborations and communications (Naser and Al Shobaki, 2016).

Also, 76.4% of the respondents acknowledged that management information systems had improved key operational processes that are important for daily business operations while 24.6% respondents disagreed that information systems only play the support role to operations management. However, all the respondents believed that management information systems played a strategic role in their organizations and perceived that MIS has a great potential for future the future operational and strategic roles in their organizations. The strategic and operational roles played by management information systems varied across various business Organizations. The commonly cited strategic roles include; strategic planning, operational control, management control, and transaction processing. However, 24% of the organization managers emphasized that MIS play different roles, depending on the level of management. To the junior managers, management information systems were largely used to access operational data for control, scheduling, and planning, and this further enabled them in decision making when caught up in out-of-control situations. To the middle managers, MIS plays a unique role in fastening short term planning, controlling, and target setting in various business functions. To the top level manager (administrators), MIS plays a distinct role in facilitating strategic planning, goal setting, and evolution of business plans and implementation of the evolved business plans.

Empirical evidence shows that successful implementation of this process can result in several productivity benefits for the business, and this benefit is enjoyed by both small and large level of businesses. The responses on the impact of a management information system on the productivity of the business are categorized into groups, namely Performance effectiveness and performance efficiency.

In terms of organizational performance effectiveness, the most important cited impact of management information systems on productivity were; increasing the degree of authority delegation (57.78), increasing the level innovation for employees (64.45), identification of customer needs and market orientation (44.5), accelerating product and service delivery to customers (44.55), and introducing information and support to the customers (42.34). However, a few respondents acknowledged that management information systems increase dependence on teamwork and speed up the accomplishment of works in time. The coefficient of variation lies between 0.13 and 1.03, while the standard deviation lies between 1.45 and 1.83, which implies that there were no significant disagreements among the respondents.

In this research study, different stakeholders were consulted to find out their roles during the implementation of a management information system. All the participants played different stakeholder roles in the implementation of management information systems in their business organizations. The participant population comprised of only internal stakeholders, namely; CEOs, IT managers, process managers, operational managers, senior administrators, system analysts, and project managers.

Results indicate that different stakeholders played different roles in which they had expertise and competence in the implementation of management information systems. For example, project managers asserted that they participate in all activities related to the implementation of the system while senior managers played a significant role of monitoring the

project milestones to ensure that the implemented system is in line with the goals of the organization.

The CEOs play a significant role in identifying the management information system needs of their organizations approved the suggested solutions. Chief executive officers participate in organizing, planning, and controlling the management information systems. CEOs also played an important role in evaluating the project of implementing new management information systems.

In this study, an attempt is made to analyze the features that may appear as the hindrance in the successful implementation of Information systems. Advancement in the field of Information technology encouraged the usage of computerized based information systems (Harley, 2015). More and more companies are trying to implement this plan for the upsurge of their business. While attempting to implement the IS, a lot of failures are reported in the past. Therefore, it is need of time to investigate what are the key factors that are negatively affecting the implementation of information. The interview asked the participants to explain the various problems or challenges they have so far faced with the implementation of management information systems. The interview process regarding the hindrances of management information systems in various business organizations was accomplished with the discussions and questions in areas regarding the chain of command, organizational facilities, resource envelope, organizational structure, system repair, and maintenance and overhaul process among others. Empirical evidence shows that one of the common causes that lead to the failure of the implementation is the lack of resources. At least 84% of the respondents from various companies

stated that they have limited resources and revenue to implement the desired information systems. Limited resources and revenue result in the implementation of information systems with low qualities.

Also, 67% of the respondents agreed that the implementation of management information systems in their organization had not been achieved successfully because of the changes in the business process that keep on emerging requiring new systems. Therefore, it is difficult to implement single management information that will work for at least a decade. The business process keeps on changing from time to time; hence, systems also have to change to manage these evolving management trends effectively (Naser & Al-Shobaki, 2016).

The stages of system implementation processes face various implementation challenges. Tight and short schedules characterize the beginning stages of MIS implementation, and 56% of respondents confirmed that lot human resources are required to plan and keep the right track of the implementation processes. Besides, the management has to support and provide adequate resources to the project teams working on the system, yet the companies may not have adequate resources. Tight schedules hindered the successful implementation of management information systems in more than 56% of the organization because of the required competent technical planning required to attain the project goals effectively and attentively.

Also, 70% of respondents identified the challenge of tedious training and education processes required to train all the stakeholders in the organization about the new systems being implemented. One of the respondents emphasized that *"Let's say for training, a thousand users need to be trained before you go live. How should you do that? That's the challenge we are*

facing". Another respondent mentioned that training of people in the organization is quite challenging by suggesting that *"I think that the training is very challenging. If a successful training is performed, the system gives more value to the users and let the support organization develop new features instead of discussing the handling of the system on and on"*.

Another cited challenge related to the implementation of management information systems is that some of the users of the system have first to get certificates to use the system as required by the industrial standards. This has affected the operation of other business activities in circumstances where the users are attending this training course. One of the participants complained that *"each training course can hold only 15 people to maintain the quality and standard of education and training process"*. Some of the systems are so complex that only staff members who have certificates can manage to manipulate them and yield positive results.

Besides, respondents emphasized that the training process involved in the implementation of MISs is difficult for an organization because of the barriers of language and computer skills required during employee training. One of the respondents said; "*most management information systems are designed in the English language. Even on the training process, they use English to educate our trainees. So, it is difficult to understand for some people who are not so good in English"*. Therefore, the continuous use of English language in the design of management information systems is a barrier towards the successful implementation of the systems in various organizations as one of the respondents stated that: "*I have a problem with my computer skill. So, it's quite hard to learn the System in the training process"*.

Another cited hindering factor is that the users of management systems being implemented for the first time in their departments need to have some knowledge about the system so that they can work with it. Sometimes, this knowledge may be inadequate, especially where the users have never seen the system at all. Some of the users need technical knowledge such as system maintenance and repair (Donada et al., 2019). In circumstances where the organization has no user guidelines that show how the users should work with the system, it becomes difficult for the users to adapt the system and achieve better results with it.

Another highlighted challenge is that the difficult segment of the implementation process was data transfer from the ancient management information system to the newly installed management information system. Data migration aims at aligning the database structure from the legacy systems to the new systems. According to one of the respondents, data from the previous system have to be transferred to the new systems, and the data processes have to be cleansed before undertaking the trial processes. The Program Manager of in one of the selected business organizations said that "*...before you go to a trials period, you need to have a successful migration. The migration is always a problem. You need to clean data in those systems*". Therefore, in circumstances where data in the ancient system is not correct or complete, it becomes difficult to have effective working processes and the implemented management system becomes more complicated, which affects its productivity.

Other cited barriers to MIS implementation are related to the leadership of the organization and stakeholder engagement issues. These are challenges related to the direction, commitment, and coordination from the senior administrators or top management such as

scheduling and timeframes, individual support, organizational support, and interdepartmental coordination (Abualoush et al., 2018).

During the discussion, 35.5% of the respondents noted that their organizations face difficulties to coordinate the implementation process across various departments and this hinders the successful implementation of the management information systems since some of the individuals may not support the system. One respondent said, *"...we have different types of responsibilities. Thus this is very difficult to set up the meeting with the right person and right responsibility*". Therefore, the process of implementing new management information systems requires individual and organizational support to achieve its objectives and goals. The support from the top management was cited as a critical factor in the majority of the respondents (71.3%) while people support was cited for effective implementation of MIS in 25.6% of the respondents.

Another hindrance to the successful implementation of management information systems is the issue of unrealistic schedules and timeframes. Accordingly, 56% emphasized that scheduling and time frames are critical factors to the implementation of management information systems in various business organizations. There was great concern regarding the lagging of time for the system implementation processes, and the characteristics of the organization largely influence this factor as one of the respondents stated that *"the organization requires several documents, description of the system, and so on so that it takes time to get approval. It's a very long process"*.

Environmental factors also hinder the successful implementation of management information systems. Our research findings indicate that external and internal politics bring a lot

of ramifications against the implementation of management information systems. The external environment greatly influences issues such as confidentiality and security; hence, the organizations have to go through a lot of system documentation to address these ramifications (Muthaiyah & Zaw, 2018). This challenge was largely cited by external stakeholders, such as IT consultants who work with various organizations. Also, some respondents noted that their organizations have first to recruit external consultants to work as advisors on various challenges associated with the software and the hardware for the implemented management information system. In circumstances where the organizations fail to acquire these external consultants, it becomes difficult to implement these MISs successfully (Babaei & Beikzad, 2014). A few respondents (14.5%) cited environmental challenges associated with the changing technology aspects and contract requirements.

Another hindrance that was largely cited in the respondents was the challenge of inadequate strategic planning regarding the implementation of a management information system at the start of the project. In this study, 68.5% of respondents agreed that strategic planning a critical factor to make a good working process regarding the implementation of a management information system in the business organization. One respondent noted that *"In circumstances, where there is no strategic analysis of the organizational objectives and system requirements, we cannot achieve positive outcomes with the implemented system."* Therefore, the inadequate strategic plan makes the system fail to complete the business objectives and goals of the organization.

Respondents also cited personnel related issues such as people management, organizational expertise, individual expertise, internal leadership, staffing, resistance to change, and training is the major hindering factors affected the process of implementing management information systems. One of the respondents stated that; "*even if an organization that has a perfect information system if the staff does not know what to do with the information that it produces, it wastes time and money."* Therefore, the lack of enough knowledge and training regarding the usage of the system was the greatest hindrance against the implementation of management information systems.

Another cited challenge was the resistance of the staff to change in every information system change. According to the respondents (78.5%), resistance to change affects their business organization in the process of introducing new management information systems because of fear of being replaced by technology, fear of the new technology in the system and fear of being unfamiliar with the system. As a result, staff members who are resistant to change cannot put off the efforts and extra work needed to learn new information system implemented (Ali, 2014). According to 70.4 % respondents, the resistance to change was a great challenge against the replacement of old information with new information system as stated by one respondent that *"some of the users didn't want to change the way they had worked before. The reason behind this seems to be the complexity of the system as one of the respondents mentioned. As a result, users can act in a way that is resistant to change".*

During the interview, 35.6% of respondents cited the challenge of lack of adequate communication by the operations managers regarding the implementation of new management

information systems. Lack of proper communication affects the system users in circumstances when they do not understand what the system is designed, how it looks like and how it should be used.

Finally, 45.6% of respondents cited technical issues as some of the greatest hindering factors to the successful implementation of management information systems, and this has largely affected both the individuals and the organizations. Issues such as software and hardware considerations, life cycles, and compatibility of the system with other information technologies employed by the hosting business organization were cited in over 46% of the respondents. For example, one respondent stated that "*We also have technical issues, for example, many failures report that needed to be corrected in the system by the suppliers before we go-live with the system."* This challenge is related to the compatibility and standardization of the system hence it hinders the implementation of the system in a circumstance where a high standard and quality application software is required for the integration between the previous system and the new system.

Respondents were asked about their opinions on how the implementation of management information systems should be improved to address the above challenges. From the responses, 74.9% of the respondents agreed that there should be good cooperation and coordination between the project teams and the organizational staff so that the staff is well informed about the new system, how it looks like, and what it does and how it works. One respondent said, "The *new subsystem should be supervised by process managers in the process of baseline development, migration, system baseline, and integration."* Another respondent said that "*the staff teams*

should be involved in the fields of control in business change management, data cleansing, business process documentation, and training." Therefore, successful implementation of management information systems should be backed by effective and efficient operations and coordination of the stakeholders in the organization.

Also, 45 % of the respondents suggested that the organizations should set up project team members who have rightful skills to do the right jobs so that they can easily train their colleagues without necessarily hiring external consultants. One respondent stated that *"Project team with the right skills and their teamwork are the most important part of being successful in this project."*

On the other hand, 55.5% of respondents emphasized the need for improvement in the test and trial processes for organizations to have a successful implementation of management information systems. One respondent suggested that a trial and test should be conducted for at least six months to ensure that the new information system is working well and meeting organizational objectives before it is integrated into the organizational systems. This would address the challenge of system failures, unrealistic timeframes, and schedules in the systems. Another respondent stated that *"Trials are important because when you test the system in a live situation, you will find the problems and get positive thinking before you go life."*

Also, respondents suggested that as new management information systems are introduced, people who are working on such systems should change their organizational culture and working processes to attain positive results with the implemented systems.

One respondent stated that "*the maintenance process of the system has to be routinely changed to ensure that the system has followed the standard pattern from the United State (US).*"

To address the challenge of resistance to change, 57.8% of the respondents suggested that some of the system areas should be improved to reduce the work tasks for the users and to make their tasks more simpler than in the case for the old system while 23.5% of the respondents suggested that organizations should employ only skilled personnel who can easily adapt to the new systems and have no fear for the technology embedded in the system. Three respondents suggested that there should be a viable project plan before the implementation of a new management information system in any business organization. Lack of a viable business strategy is the greatest challenge impeding proper planning and achievement of system implementation goals. Therefore, there should be systematic reviews of the strategic plans for successful implementation of new management information systems in the organization.

Also, program managers suggested continuous tests and trials before the deployment of new management information systems. Gargeya and Brady (2015) found that tests and trials of a management information system are "the key components of success for some organizations" (p.34). Respondents suggested the implementation process requires continuous monitoring and recording of the feedback so that the quality of outcomes from the implemented systems is fully controlled.

Evaluation of the findings

This study has been conducted in line with the following research questions. What is the role played by management information systems in a business organization? Who are the main

stakeholders, and what are their roles in the implementation of management information systems in a business organization? How do management information systems impact the productivity of a business organization? What are the barriers that hinder the successful implementation of a management information system, and how can these barriers be addressed?

Respondents were asked about the key stakeholders in the implementation of Management information systems. The different organization had different stakeholders on this matter. Key stakeholders include IT administrator, operational managers, and senior planning managers, among others. Other roles played by senior managers include planning and scheduling of the project, financing of the project, and approval of the project deliverables (Abualoush et al., 2018). Operation managers and IT professionals played a significant role in advising the budget while IT professionals advised other internal stakeholders about the recommendable management systems that should be used and how the costs should be mitigated (Muthaiyah & Zaw, 2018).

About the role of MIS, management information systems play a significant role in fostering the smooth running of business organizations. At least 85% of the respondents emphasized that management information systems address the strategic business challenges such as competition management, demand forecast, business analysis, and artificial intelligence, among others. In relation, this response, Ellis & Levy, (2012) also found that the integration of management information systems in business organizations facilitate for improved decision making and hence the attainment of success not only in the short-term but also in the long-term. According to Kuraesin (2017), the application of technology is amongst the vital factor that is

responsible for the growth of many SMEs. Leaders of small and medium-sized enterprises must adopt information and communications technology to increase their competitiveness and access the domestic and global markets.

In terms of productivity, responses of the participants on systems on productivity are summarized as follows; increasing the degree of authority delegation; increasing the level innovation for employees; identification of customer needs and market orientation, accelerating product and service delivery to customers and introducing information and support to the customers. In the same accord, Naser and Al Shobaki (2016) argued that the use of technological advances enhances the performance of firms within both advanced and developing economies. The large size and complicated structure of large-scale enterprises make them less flexible to market changes; hence, SMEs have a competitive edge for the successful implementation of technology. Also, Donada et al. (2019) suggest that the application of ICT in a firm improves market efficiency, business process, performance, and access to information and contributes to effective communication. This strategy can help business enterprises of any size in developing and advanced countries to become market leaders and significantly increase their competitiveness.

Results also indicate the responses of participants in the successful implementation of Information systems in their business organization. Respondents stated that they have limited resources and revenue to implement the desired information systems. According to Ellis & Levy (2012), limited resources and revenue result in the implementation of information systems with low qualities. SMEs should invest resources in reaching a high level of adoption, if and only if it

expects that such costs will be compensated by the benefits derived from such action. About these suggestions, the benefits of adopting ICT should be visible before implementing any changes in the management information systems. The resource envelope supports projects including; time, technical personnel, materials, and financial resources. For this reason, resource monitoring at every stage of planning is paramount.

According to Babaei & Beikzad (2014), companies with limited resources or revenue attempt to implement the information system with either higher costs or low qualities. Efforts should be taken to determine whether the selected program will be viable for the company. Besides, respondents emphasized that the changes in the business process that keep on emerging requiring new systems affect the implementation of management information systems. About this suggestion, BEYINA (2018) also noted that business trends are never constant, and organizations have to keep on evolving their systems to catch up with the increasing competition. However, respondents suggested that continuous changes in the information systems are quite expensive, and this limits the successful implementation of MIS.

Respondents were asked about their opinions on how the implementation of management information systems should be improved to address the above challenges. Respondents suggested that there should be good cooperation and coordination between the project teams and the organizational staff so that the staff is well informed about the new system, how it looks like, and what it does and how it works. In the same accord, Kuraesin (2017) suggested that if the staff is not informed about the new information systems, the new changes in MIS are likely to be resented. Also, as new management information systems are introduced, people who are working

on such systems should change their organizational culture and working processes to attain positive results with the implemented systems (Okumus et al., 2017).

Program managers suggested that there should be continuous tests and trials before the deployment of new management information systems. In the same accord, Gargeya and Brady (2015) found that tests and trials of a management information system are "the key components of success for some organizations" (p.34).

When respondents were asked about how to improve the management information systems from time to time, the responses varied depending on the nature of the business. Small scale business managers emphasized that management information systems have less effect on the organizational structure. Therefore, maintenance, repair, and overhaul should be conducted where there is a necessity or where the technical personnel deems necessary while large-scale business managers suggested that management information have a big effect on the operations of the organizations hence improvements should be conducted depending on the ongoing management and business trends (Donada et al. 2019)

Summary

This study was aimed at exploring the barriers to the successful implementation of management information systems in business organizations. For this purpose, a qualitative research design was adopted, and Interviews were taken from a sample of 100 key stakeholders from various business organizations across the United States. The aim was to conduct an in-depth analysis of the processes of implementing MIS in successful companies, the hindering factors, and the solutions on how such barriers can be addressed. Our findings show that whereas

MISs play a significant role in fostering smooth-running of the business and enhancing business productivity, several challenges such as inadequacy in the resource envelop, increasing costs of production, required human resource trainings, opposition from the members of staff regarding MIS changes and increasing changes in business trends are the most factors hindering the successful implementation of MIS. Several suggestions have been made on how to address these barriers as previously highlighted in theme 5.

Chapter 5: Implications, Recommendations, and Conclusions

The purpose of this qualitative study was to determine the barriers hindering the implementation of management information systems in business organizations and devise appropriate ways to overcome such barriers hindering the implication of MIS. From the literature review, it was discovered that different organizations face hindrances in their move towards the implementation of management information systems. These challenges vary from one organization to another depending on the inherent organizational structures and the change management processes associated with each organization.

To determine the challenges faced by various organizations in their move to implement new management information systems, a sample of 100 key stakeholders from various business organizations (managers, human resource officers, chief executive officers, etc.) were recruited and interviewed about their perceptions and experiences with the challenges faced in their respective business organizations associated with the implementation of management information systems. The researcher followed the IRB standards from Northcentral University and applied all confidentiality requirements. All participants signed an informed consent before data was collected. In addition, the researcher ensured that the responses are well recorded and transcribed in accordance with the institutional requirements. Because of the qualitative nature of the research study, expert analysis approach was used to analyse the findings and generate inferences from particular perceptions and opinions raised by the respondents.

This section is largely composed of three sub-sections namely; the implications of this research study in terms of how the findings obtained can be helpful to business organizations.

The next subsection highlights the recommendations based on the findings obtained in the research study. These include recommendations for good business practices and other recommendations for further research studies. The last subsection is the conclusion chapter draws inferences from both the existing literature and the current research based on what has been done.

Implications

The researcher studied the barriers affecting the successful implementation of management information systems in various business organizations and to suggest the strategies which can be used to address such barriers. The following research questions guided the study which was qualitatively conducted through interviews. These questions acted as the principal means for collecting data for identifying themes and were used to form a framework from which the study was contextualized. The research findings obtained with each question validated previous researcher findings that the successful implementation of management information systems in any business organizations is not a smooth journey (Bryson, et al., 2018).

RQ1. What is the role played by management information systems in a business organization?

All the respondents agreed that their organizations used management systems to play numerous roles to carry out the functions of different departments like Human Resource, Customer Relationship, Inventory Management and Control Department, etc. Moreover, MIS also helps in predicting market trends and implementing organizational policies among others. These findings imply that more than 90% of the companies were fully satisfied with the role of

management information systems. In related studies, Al-Zhrani (2010) and Bryson et al. (2018) noted that management information systems offer the best solutions to the implementation of business strategies and organizational policies. Also, Naser and Al Shobaki (2016) argued the use of technological advances enhanced the performance of firms within both advanced and developing economies. The large size and complicated structure of large-scale enterprises make them less flexible to market changes; hence, SMEs have a competitive edge for successful implementation of technology (Monirah et al., 2017). In addition, Donada et al (2019) noted that the application of ICT in a firm improves market efficiency, business process, performance, and access to information and contributes to effective communication. This strategy can help business enterprises of any size in developing and advanced countries to become market leaders and significantly increase their competitiveness.

RQ2. What are the barriers that affect the successful implementation of a management information system?

Business organizations have shown overwhelming response by growing obstacles during the implementation of MIS stages. The major challenges included the MIS strategy and change process management. Most of the noted challenges included lack of commitment from the employees to embrace new technology, weak management roles in the implementation of MISs, Lack of adequate communication, complexities associated with training of the human resource, resilience of the employees against the MISs, difficulties in employing the right staff, the constantly changing business trends and user needs, failure to manage change management processes, technical difficulties associated with the MIS implementation

In their qualitative study, Babaei and Beikzad (2013) also studied the technical, human, and organizational-related challenges affecting the implementation of management information. The main challenges that hinder the successful implementation of MIS includes changes in the need of users, failure to coordinate and employ the IT staff, training of new changes in MIS to staff, and lack of knowledge regarding the MIS. In addition, Monirah et al. (2017) noted that lack of adequate hardware and software budget as well as the overwhelming expenses associated with new system changes also affected the implementation of MIS. Ellis and Levy (2012) limited resources and revenue result into the implementation of information systems with low qualities. SMEs should invest resources in reaching a high level of adoption, if and only if it expects that such costs will be compensated by the benefits derived from such action. In relation to these suggestions, the benefits of adopting ICT should be visible before implementing any changes in the management information systems. Projects are supported by the resource envelope including; time, technical personnel, materials and financial resources. For this reason, resource monitoring at every stage of planning is paramount. Babaei and Beikzad (2014), reported that companies with limited resources or revenue attempt to implement the information system with either higher costs or low qualities. Efforts should be taken to determine whether the selected program will be viable for the company. Also, the continuous changes in the business process cause the hindrance in the implementation of Management Information System.

RQ3. What strategies can be used for better implementation of a management information system?

Fortunately, this research study presents a number of suggestions on how these challenges should be addressed amicably for successful and effective implementation of MISs. Respondents suggested that organizations should have effective change management processes and adequate strategic planning in their journey towards the implementation of MISs. One respondent noted that "In circumstances, where there is no strategic analysis of the organizational objectives and system requirements, we cannot achieve positive outcomes with the implemented system". Therefore, adequate strategic planning helps the organization to implement effective MISs that can complete their business objectives and goals. In a related study, Monirah et al (2017) agreed that there should be a group-level collaboration, capability, and knowledge sharing between the top management and the lower level employees in the transition process to new management information technologies. Team management and systems developments capabilities were the most emphasized aspects of MIS implementation process.

Based on the above research findings, t is noted that despite the vast research done about the challenges affecting the implementation of Management information systems, the increasing changes in business requirements and market trends create many hindrances to MIS implementations and most of the challenges have not been addressed in many business organizations. By gathering these challenges and raising suggestions on how such challenges can be addressed, this research creates a significant impact in most the existing business organizations about the relevant organizational practices that should be implemented in the move to integrate management information systems. The findings obtained in this research study will be for the entrepreneurs to select appropriate MIS for their company, institute better change

management strategies and policies, and address the underlying barriers affecting the successful implementation of MISs in their business organization.

Recommendations for Practice

Based on the above research findings, it is noted that most of the challenges affecting the implementation of MISs in business organizations are technical, human and management related. The success and the effectiveness of MIS implementation in any business organizations still remain the organization's capability to have strategic and tactical planning in the change management processes and decision-making processes prior to the implementation of any MIS. It is therefore highly recommended that all departments handling the change management processes should have adequate collaborative stakeholder engagements and knowledge sharing so that there is a free flow of information from the top administration to lower level employees in the implementation of MISs. It is highly recommended that the responsible departments should conduct proper orientation of all the employees such that the increasing resistance and lack of commitment to the MIS implementation are amicably addressed. In circumstances where the organizational workers cannot comprehend and are unaware of the new technologies being implemented, they cannot cooperate and commit to working with the newly installed systems. The only way to address the aforementioned challenge is to encourage the top management to participate in collaborative engagement, orientation, training, and capacity development during the early MIS implementation processes. Organizations should create a technical team to advise the developers on alternative solutions to the underlying problems and contribute to the continuity of the development processes. These solutions must be formed by academics and

representatives of successful business organizations across the world. IT Specialists such as operations researchers, systems analysts, designers, IT personnel and accountants must corporate and get informed of the managerial functions such that the new MIS are effective within the organization. Finally, there should be effective communication channels between the information professionals and the top management to produce a perfect and effective MIS. Good communication channels simplify the task of developing and deploying suitable MIS.

Recommendations for Future Research

Due to the reduction of production costs and the redirection of resources towards the creation and development of new techniques to favor internal communication, effective information is produced that reflects the real needs of the market and the company itself, directly impacting on business performance. Therefore, future research about the implementation of MIS in any business organization should be in four specific areas: a) the technological infrastructure for communication. b) The use of MISs with strategic organizational stakeholder engagement c) Learning and knowledge development in areas of MIS implementation d) management of structural changes in the organization associated with the use of the MISs. This research knowledge gives business organizations with new change management policies and strategies based on interdepartmental integration, mobility of information through operations, as well as a timely response of the relevant stakeholders.

Conclusions

Currently, the Management Information System is considered a strategic component, which helps in the development, expansion, and constant improvement in the private and public

sectors worldwide. The first thing that is noticed in almost all medium-sized companies and many large companies is a degradation of information or lack of relevance of it. Information systems are not placed at the level of importance or degree that corresponds. They are placed at a lower level than reality demands. In the current paper, the study includes the exhaustive and critical analysis of the factors which help in the characterization of the MIS implementation.

Moreover, it also involves the challenges which are being encountered during the implementation of MIS. Furthermore, it also includes strategies which help in the development of MIS, and lastly, it also proposes metrics which allow the evaluation of the MIS that will assist in the systematic and constant improvement of such practices within the organization.

The Management Information System study focuses on addressing the issues that are related to the academic literature, which involves the explanation of knowledge management regarding MIS. However, there is also a lack of in-depth analysis of the elements which help in making knowledge management system successful for the business perspectives. Besides, the lack of measuring the criteria and evaluation process of the MIS implementation system is recognized as an issue in public sectors from the business perspective of different experts.

The involvement and contribution of the current study involve the provision of elements and factors that are valuable enough for any kind of academic debate, favourable strategies, and the metrics through which diverse MIS initiatives in institutes could be quickly evaluated. To achieve the purpose of the current research, an exhaustive systematic review of the academic literature has been conducted to come up with the major critical factors which have been understudied to date. It also involves the metrics in the form of the proposal so that performance

evaluation and success of MIS on a different business level can be seen. Furthermore, qualitative study in depth would be carried out in one of the Maryland organization to know the critical success factors required for the MIS implementation. The project managers were taken as a population of a target for the current study. For sampling purpose, purposive sampling technique will be used. Data will be collected through interviews with different project managers.

The management information systems streamline the decision-making processes of the company where it is being installed, but it requires capital investment by the companies, in addition to the careful design before implementation, as well as training for all the users. Information systems never stop updating, as companies are continually changing, and that is why new needs arise.

When a company installs a management information system does not mean that the problems of this are over, it is provided to the managers of that company, timely and accurate information for decision making. But success or failure does not depend on whether or not it has a system of these, depends on the decisions made by the manager of the company with the information that these or other means provided.

The study is significant in improving the business revenue. The information which is gathered through the data will help in the implementation and better outcomes. Besides, it will help out to look over certain limits that a company might experience while searching and implementing a new program. Barriers in the successful implementation of MIS will be discovered.

With the current evolution of data used, the need arises to implement a management information system within this that facilitates the management of the processes so that this information is more efficient and guides us towards the future with the taking of right and timely decisions. The system would be structured to store, order, process, and issue results, and constituting stable and consistent decision tools.

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