ADDIS ABABA UNIVERSITY

COLLEGE OF NATURAL SCIENCE

SCHOOL OF INFORMATION SCIENCE

FACTORS INFLUENCING IT/IS OUTSOURCING: CASE OF NATIONAL BANK OF ETHIOPIA

BY

WAKTOLA MERDASSA

JUNE 2019

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Declaration

This thesis is my original work and has not been presented as a partial requirement for a degree in any university, and all source of materials used for the study has been accordingly acknowledged.

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Waktola Merdassa

June 2019

The thesis has been submitted for examination with my approval as University advisor.

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List of Abbreviations

Abbreviations	Description
BSA	Bank Super Vision Application
EATS	Ethiopian Automated Transfer System
ECRB	Ethiopian Credit Reference Bureau
FEMOS	Foreign Exchange Monitoring system
GB	Giga byte
HRMS	Human Resource management System
IFMIS	Integrated Financial Management Information System
IMF	International Monitory Fund
IS	Information Systems
ISMD	Information Systems Management Directorate
IT	Information Technology
ITO	Information Technology Outsourcing
MoFEC	Ministry of Finance and Economic Cooperation
NBE	National Bank of Ethiopia
PSMS	Property and Service Management System
PMBOK	Project Management Body of Knowledge
QBS	Quantum Banking Solution
RFP	Request for Proposal
R&D	Research and Development
SLA	Service Level Agreement
SWIFT	Society for Worldwide Interbank Financial Telecommunication
VPN	Virtual Private Network

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Abstract

IT/IS outsourcing emerged as an important tool for enabling organizations to improve the quality of their services, reduce IT costs, and obtain access to external resources. It has become an important aspect of the overall strategy of any organization including the banking industry whether it is a regulatory body or commercial. Despite its benefits, there are wide reports of unsuccessful IT/IS outsourcing experiences. One of the main reasons for such a high failure rate is associated with improper ITO decisions which are influenced by different external and internal factors. However, those factors influencing the IT/IS outsourcing decision are relatively not studied in the case of Ethiopian banking industry.

This study was aimed to empirically investigate factors influencing IT/IS outsourcing in the case of the National Bank of Ethiopia. The Bank has outsourced different software developments and their maintenance, infrastructure supports, database supports, data center design, five years strategic plan of the Information System Management Directorate, VPN service and support, website development and many other IT services. While outsourcing all these services, the bank has no formal and documented outsourcing strategy and its outsourcing decisions are being influenced by different factors. Identifying those different factors influencing the Bank's IT/IS outsourcing was the objective of this research. To guide and frame the research, a conceptual research model was developed by reviewing different literatures.

The study employed the qualitative research methodology and used a semi-structured interview and document review to collect data. The collected data was analyzed according to the research objectives and questions. The result of the analysis show that there are macro-environmental factors such as political and legal (e.g., political unrest, pressure from international aid organization, government initiative,…), economic (e.g., Increase in currency exchange rate, price fluctuation, scarcity of foreign currency,…), social (Cross-language communications, public holidays,…), technological (e.g., Obsolescence of technology, emerging technology, complexity,…), industry (e.g., Standardization, Market Maturity,…) and internal (e.g., Lack of internal system development team, internal Capacity building, Lack of awareness, Internal bureaucracy, Involvement of the top management,…) factors influencing the Bank's IT/IS outsourcing.

The knowledge of these factors and their effects on IT/IS outsourcing could help CIOs or IT managers in developing their IT/IS outsourcing strategy and in order to have more managed IT outsourced services, decreased decision time and cost, and increased decision quality.

Key terms: IT/IS outsourcing, ITO decision, factors influencing IT/IS outsourcing

Chapter 1

Introduction

1.1 Background

Organizations need to operate effectively and efficiently in todays' changing environment and changing needs of their customers in order to be competitive and achieve their goals. Hence, different strategies like standardization, automation, business process reengineering and outsourcing are employed by managers in order to achieve their organizational goals (Carpenter & K.Agrawal, 2010). Among these strategies, this study focuses on outsourcing. There are many types business process outsourcing used by organizations of which the IT/IS outsourcing is the mostly used (Doval, 2016). Studies show that, half of every IT budget is spent on outsourcing (Urbach, Ahlemann, & Arbi, 2014).

Organizations outsource their Information System activities to external vendors to get advantages like cost reduction, accelerate time to market, take advantage of external expertise, assets and/or intellectual property, reducing IT risks and increasing the level of flexibility (Due, 1992). Lack of proper experience and need for broader perspective to handle certain activities effectively and efficiently also leads organizations to look for vendor expertise (Schulte, 2004). This is because vendors can have a capacity that an organization lacks and they can offer services at lower cost. According to ISACA (2013), from their experience with operational risks mitigations, vendors become the last resort for organizations to work with.

There are lots of IT services that are outsourced by organizations to a single or multiple vendor. Application development and maintenance/service of support operations, infrastructure management, help desk, independent testing and validation, data center management, systems integration, managed security and cloud computing are among the commonly outsourced services (Ramarapu, Parzinger, & Lado, 1997; Ames, et al., 2012).

Organizations use different outsourcing strategies. For instance many US companies that view outsourcing as an effective way of strategically leveraging resources and managing costs were increasingly shifting at least some of their IS activities, especially applications development and

support to foreign sites in countries such as Ireland, India, and Argentina (Ramarapu, Parzinger, & Lado, 1997). This could be one Information System outsourcing strategy that is defined as a long-term plan derived from assessing which IT functions are better to perform by an IT outsourcing service provider than by an organization's internal IT department.

1.1.1 Outsourcing in Worldwide

Outsourcing has been practiced everywhere in the world. In the US, the Bank of America, Best Buy, Delta Airlines, Goodyear, IBM, the Marriott, Motorola, PepsiCo, Procter & Gamble, and Sun Microsystems are all outsourcing some of their organizations' functions. US federal and state governments also spend billions each year doing so(Weinstein, 2005).

According to (Heshmati, 2003), US companies have off-shored their manufacturing and their R&D facilities in their semi-conductors, computing, chemicals and pharmaceuticals to the UK, Germany, France, Ireland and other developed countries. Surprisingly, number of US companies continually claim that there is a lack of trained IT workers in the US and they continually search for overseas vendors to perform IT functions (Aman, 2010). In Europe also, many manufacturing organizations have chosen to outsource their non-core activities previously conducted in-house to a third-party supplier.

Of the 58 billion euros ($76 billion) worth of major (greater than $40 million) outsourcing contracts awarded in year 2004, Europe represented 49% of the value, while the U.S. took 44% and Asia 7%. European contracts doubled from 2002 to 2004. Germany is leading the way, accounting for 12.5% of the value of the worldwide contracts awarded in 2004, coming in at the heels of only the UK, with 20%, and the U.S. as the largest country market. Germany's share has increased from less than 1% in just four years (Carpenter & K.Agrawal, 2010).

According to Deloitte's 2016 global outsourcing survey, the market for outsourced services will likely continue its rapid adaption to meet the demands of the customer. It is reported that while the regulatory environment has changed quite significantly for some industries since our 2014 survey, there is still significant strength in the outsourcing market (Deloitte D. L., 2016).

1.1.2 Outsourcing in Africa

According to a study done on a review of Information System outsourcing in Africa, Information System development outsourcing is growing with accelerated speed in Africa. This is due to increased awareness of advantages of using outsourcing, the fast spread of globalization, attention given by many African governments to the development of Information System, strong need to

access the latest technologies due to rapid changes in Information Technology like cloud computing, web services, mobile computing, and other areas. Therefore, to be competent in global market, African organizations are outsourcing their IT activities to gain from its advantages (Nduwimifura, 2015).

1.1.3 Outsourcing in Ethiopia

Different studies have been undergoing in Ethiopia on the topic of IT/IS outsourcing. Meresea (2007) studied the top business functions outsourced by Ethiopian organizations. Muluneh (2009), studied Management of Information Systems Development Outsourcing in Ethiopia: the case of the Ethiopian Telecommunications Corporation, now ethio telecom. Iyasu (2017), studied benefits and challenges of outsourcing in National Bank of Ethiopia.

1.1.4 Outsourcing in Banking Sector

According to a study of Tié, Huertas, López, & Sánchez (2010), on outsourcing in the banking sector, more than half of the banks surveyed carry out outsourcing operations. In their research, they mentioned that software development is the top most outsourced IT activities. Other outsourced activities mentioned they mentioned include, printing, e-banking, payroll management and accounting, backup, microcomputers, computer security, user support and many more.

1.1.5 Outsourcing in National Bank of Ethiopia

In order to set the context of the study, it is imperative to provide brief account of the organization considered as a case: The National Bank of Ethiopia.

According to data the researcher got from the Bank's website (NBE, 2019), National Bank of Ethiopia was established in 1963 by proclamation No. 206 of 1963 and began operation in January 1964. Prior to this proclamation, the Bank used to carry out dual activities, i.e. commercial banking and central banking. Following the proclamation, the National Bank of Ethiopia was delegated with the following responsibilities.

- To regulate the supply, availability and cost of money and credit.
- To manage and administer the country's international reserves.
- To license and supervise banks and hold commercial banks reserves and lend money to them.
- To supervise loans of commercial banks and regulate interest rates.

- To issue paper money and coins.
- To act as an agent of the Government.
- To fix and control the foreign exchange rates.

In the year 1976 the Bank's role was reshaped to socialist economic principle by proclamation No. 99 of 1976's enforcement until 1994 when the bank was reorganized by another proclamation with - the market-based economic policy. With this new proclamation 83/1994, the following powers and duties were vested in the bank:

- Regulate the supply and availability of money & credit and applicable interest and other changes.
- Set limits on gold and foreign exchange assets which banks and other financial institutions authorized to deal in foreign exchange an hold in deposits.
- Set limits on the net foreign exchange position and on the terms and amount of external indebtedness of banks and other financial institutions.
- Make short and long-term refinancing facilities available to banks and other financial institutions.

The vision, mission and goals of the National Bank of Ethiopia (NBE, 2019) has originated from the overall vision of the government which is "to see a country, wherein democracy and good governance are prevailed upon the mutual consent and involvement of its people, wherein social justice is reigned, and wherein poverty reduced and income of the citizens reach to a middle economic level".

Vision of the Bank:

To be one of the strongest and most reputable central banks in Africa.

Mission of the Bank:

To maintain price and exchange rate stability, to foster a sound financial system and undertake such other functions as are conducive to the economic growth of Ethiopia.

To carry out the above-mentioned duties and responsibilities, and to achieve his mission and vision, the Bank has structured itself according to the structure depicted in the Figure 0-1 below.

As it can be seen from the Organizational Structure figure, Information Systems Management Directorate is of the Bank's Directorates under the Corporate Services cluster. Under the Bank's

vision and mission, the Directorate has a mission of, “Provide and support secure, reliable and modernized information technology that enables the efficiency and effectiveness of Bank’s business processes and making available timely and credible information to stakeholders in an effective and efficient manner”.

Before becoming a directorate, its name was computer center when it was first established in the bank with human resource not more than five. The core system that was known at that time was Bank Master which is standalone application where its server had 2 GB hard disk. Later, when the Bank was restructured in year 2004, it was organized as Information System Department under the Directorate of Finance and Information system. During Business Processes reengineering the Department was established as a directorate with two deputy directorates (System development and Infrastructure Management). Later, due to the increase number of IT/IS systems hosted by the bank and highly increased business need from the business department, the Directorate was organized as seven teams to provide required support for the Bank.

The major stakeholders of the Information Systems Management Directorate are internal and external stakeholders. However, the Directorate has both internal and external customers that receive ICT and information services. Primary Stakeholders are of ISMD are, Vendors, Financial Institutions, Ministry of Finance and Economic Cooperation (MoFEC), Ethiopian Commodity Exchange (ECX), Ethiopian Revenue & Custom Authority (ERCA), General Public, NBE Board, Top Management, Processes Owners (Directors) and the Bank’s Employee. Other Government Organization and International Institutions are secondary stakeholders of the Department.

The Ethiopian Government, recognizes the role of ICT in the social and economic development of the nation and has made the development of ICT one of its strategic priorities. It has endorsed and enforced an ICT policy which seeks to support the on-going process of sustainable development and poverty reduction as well as good governance and democratic system.

Taking a lead from the Government, National Bank of Ethiopia (NBE) is also trying to provide services that its customers need from it by improving its Information Technology environment through Information Systems Management Directorate (ISMD). The Bank has a vision to be one of the strongest and most reputable central banks in Africa and a mission of maintaining price and exchange rate stability, to foster a sound financial system and undertake such other functions to encourage the economic growth of Ethiopia (NBE, 2019). In order to achieve this vision and

mission, the Bank is highly dependent on IT. It was using both in-house developed and locally outsourced systems before few years. Currently, however, it has outsourced most of its mission critical Information Systems development and their supports, data center design, network design and infrastructure support to different local and international vendors.

1.2 Statement of the Research Problem

IT/IS outsourcing emerged as an important tool for enabling organizations to improve the quality of their services, reduce IT costs, and obtain access to external resources. It is evident that its market is also growing rapidly. Despite its benefits, there are wide reports of unsuccessful IT/IS outsourcing experiences where vendors failed to deliver the expected services (Bahli & Rivard, 2013). In one study, IT managers reported only a 33% satisfaction rate with outsourced IT services, as compared with a satisfaction rate of 70–80% for outsourced non-IT services (Wang & Yang, 2007). One of the main reasons for such a high failure rate is associated with improper ITO decisions. In the case of National Bank of Ethiopia, Iyasu (2017) mentioned that despite the benefits of IT outsourcing, the Bank has faced many challenges.

ITO researchers have apparently studied a range of outsourcing alternatives from the most fundamental make-or-buy to more refined options about sourcing specific IT functions. ITO decision making is a very complex task with a broad range of factors impacting the decision. Studies implied that to make an outsourcing decision adequately, chief information officers (CIOs) must spend approximately 80% of their time, for three to six months (Yang, Kim, Nam, & Min, 2007). Therefore, identifying the most important influencing factors of proper ITO decisions could lead to more managed IT outsourced services, decreased decision time and cost, and increased decision quality.

Given the nature of IT-intensive business processes and services, the banking industry has an enormous potential for benefiting from outsourcing. A study of Jain & Natarajan (2011) conducted on the banking industry indicates that Banking and Financial Services Industry has been the largest sector of outsourcing services worldwide. However, there is a scarcity of studies investigating the effect of diverse macro-environments, industry and internal factors on banking services

outsourcing decisions, except for a few attempts (Gewald & Dibbern, 2009; Jain & Natarajan, 2011). This study tries to fill this research gap by developing a conceptual model incorporating a wider set of factors influencing ITO decision in context of NBE's IT/IS outsourcing.

IT outsourcing studies in Ethiopia has focused on different aspects of outsourcing like, challenges and benefits Iyasu (2017), risks and management of outsourcing Bezawit (2017), management of IT/IS outsourcing Muluneh (2009). Yet there is no research done studying focusing only on factors influencing IT/IS outsourcing decision and their effects on the outsourcing covering a wider range in the banking industry of Ethiopia as per the researcher's review. Thus, this paper tries to fill this research gap by focusing on external, industry and internal factors influencing IT/IS outsourcing decisions in the case of National Bank of Ethiopia – a bank in a developing country.

1.3 Research Questions

- What factors are influencing IT/IS outsourcing decision?
- What are the effects of those influencing factors on IT/Outsourcing?

1.4 Objective (General & Specific)

The general objective of this research was to explore factors influencing IT/IS Outsourcing decisions with specific reference to the National Bank of Ethiopia.

1.5 Specific Objectives

- Review different IT outsourcing practices
- Identify factors that may influence IT outsourcing decision.
- Identify effects of those influencing factors on the Bank's IT/IS outsourcing.

1.6 Scope and Limitation of the Study

The scope of this study is identifying factors influencing IT/IS outsourcing decisions and their effects on outsourcing of banking sector as the sector is highly outsourcing dependent. It is limited to studying from IT/IS outsourcing experience of the National Bank of Ethiopia. NBE has outsourced different IT functions like data center design, IT strategic roadmap plan, system development, application supports, infrastructure supports and many other IT services to both local

and international vendors. NBE is selected because it has many years of experience with IT/IS outsourcing and focusing on a single organization helps researcher to investigate the factors closely and provide deep insights because in multiple-case research, there can be a high chance of losing valuable information by summarizing multiple case studies (Peattie 2001).

1.7 Significance of the Study

This study contributes to the ITO literature by empirically investigating factors influencing outsourcing decision focusing on the banking sector specifically NBE. Therefore, the sector including NBE could benefit from this study by better understanding factors affecting the banking sector outsourcings and respective effects of those factors on their outsourcings. Since making ITO decision is complex in its nature and consumes lots of management's time, this research could help CIOs, IT managers and Strategy makers by letting them know the possible factors affecting outsourcing decisions and their effects from external, industry and internal perspectives. This could help them in having a quality decision and minimized decision time.

1.8 Organization of the Research

This research is into six chapters. The first chapter presented background of the study, statement of the problem, objective of the research, and scope and limitation of the study. The second chapter presents literature review which discuses on different concepts of outsourcing. Conceptual research model which framed the study is presented in chapter three. In the fourth chapter, research methodology is presented. Analysis of data collected is presented in the fifth chapter. Chapter six presents conclusion, recommendation and contribution of the study.

Chapter 2

Literature Review

Managers can leverage their organization's skills and resources by combining two approaches namely, by concentrating on organizational own resources on a set of core competencies – a hidden capability that gives organizations a unique competitive advantage (Arslantas, 1999) – and strategically outsource other activities which has neither a critical strategic need nor special capabilities (James Brain & Frederick, 1994). However, there are different issues that need close attention from managers. First, they need to analytically define and develop what are possible core competencies to their organization that will provide firm's uniqueness, competitive edge, and basis of value creation for the future. Secondly, they need to strategically decide whether to keep those core competencies in house or outsource them to third party. Since there are many risks (Bezawit, 2017) and benefits (Iyasu, 2017) related to outsourcing, thirdly managers need to assess and contain critical risks and benefits of outsourcing in particular situations (James Brain & Frederick, 1994). However, according to research conducted in 162 European companies that have outsourced their IT/IS totally/partially, 70% of them do not have a formal outsourcing policy (Willcocks, Fitzgerald, & David, 1995).

In the following sections of this chapter, different topics related to IS outsourcing like definitions—from definition of Information System to Information System outsourcing– reasons and types of outsourcing, advantages, disadvantages and risks of outsourcing, emerging trends in IS outsourcing and related works will be discussed.

2.1 Introduction

Avison and Fitzgerald (2008) define an Information System as "a system that assembles, stores, processes, and delivers information relevant to an organization (or to society), in such a way that the information is accessible and useful to those who wish to use it, including managers, staff, clients, and citizens. An information system is a human activity (social) system that may or may not involve the use of computer systems". This definition seems a completed definition since it addresses both human and computer components of Information system. Therefore, outsourcing Information System could possibly include both human and/or computer element of the

Information System. However, typically, it is the computer element of IS that is referred to when we talk about Information System Outsourcing. This could include purchasing of a software package off-the-shelf or effectively outsource the development of software to external software development organization.

Since 1960's as part of strategic management, outsourcing is becoming more and more popular in the field of business, being a way to reduce costs and to create competitive advantage and increase organizations performance. Due to this, different companies outsource differently. For instance, some companies like Coca-Cola and Apple have externalized their outsourcing as much as possible. However, this externalizing created new competitors like Samsung and Foxconn to Apple while it enabled Coca-Cola in getting business performance (Doval, 2016). Before going further, let us see different definitions of outsourcing by different authors.

2.2 Different Definitions of Outsourcing by Different Authors

The term outsourcing is a made-up word meaning "outside resource using" (Arnold, 2000). The term was first used in 1979 in the Journal of the Royal Society of Arts Vol. CXXVII, 141/1 in the context of outsourcing engineering services by German automobile manufacturers (Radlo, 2016).

Other authors define outsourcing differently. To mention few:

"Outsourcing is the practice of hiring private contractors, which are not necessarily based in another country, to handle projects for a company. Offshoring, a kind of outsourcing, is the term used to distinguish projects that are being outsourced to overseas contractors" (Brown & Scott, 2005)

Another definition outsourcing which was defined by Handfield (2006) and used by Doval (2016) is, "a practice used by different companies to reduce costs by transferring portions of work to outside suppliers rather than completing it internally". Outsourcing can be also defined as, "the strategic use of outside resources to perform activities traditionally handled by internal staff and resources". It is also defined as a strategy by which an organization contracts out major functions to specialized and efficient service providers, who become valued business partners (Doval, 2016).

IT outsourcing means handing over the management of some or all of an organization's information technology (IT), systems (IS) and related services to a third party (Willcocks, Fitzgerald, & David, 1995).

The table below shows additional definitions of outsourcing by different authors.

Definition of outsourcing	**Author/s (year)**
A different make or buy: mixture of conclusions to achieve the compulsory provision of resources and services designed for the creation of goods and services for organizations.	Harrigan (1995)
Outside vendors' terms of substantial or human resources related with information technology (IT) methods for organizations.	Loh & Venkatraman (1992)
Activities from external possession, together with 'those traditionally considered an integral part of any firm, provided that they do not form part of the firm's core capabilities'.	Quinn & Hilmer (1994)
Partnership agreement among diverse categories of organizations in which a particular firm is a professional in knowledge and creates a momentous involvement with the other through supplying corporal or human resources for the phase of a definite time with the purpose of accomplishing a specific purpose.	Sacristán (1999)
Transitory over several of or the entirety of particular business functions and associated services to a third party organization, for a compulsory outcome.	Bailey et al. (2002)
The process of changing a business deal earlier governed within to an outside provider throughout a lasting convention, and concerning the relocation to the vendor.	Quélin & Duhamel (2003)
Not simply consisting of purchasing goods or services from outside suppliers; also transfers the accountability designed for business tasks and frequently the allied information to the outside firm.	McCarthy & Anagnostou (2004)
The procurement of provisions from an officially sovereign body.	Mol et al. (2005)
To execute development and supply required services and materials, by paying external suppliers and distributors.	Krajewski, Ritzman, & Malhotra (2006)

Table 2-1 Diverse definitions of outsourcing. -Source - (Espino-Rodríguez & Padrón-Robaina, 2006)

Jerry & Jo Ann (2005), defined IS outsourcing as "the decision by an organization to seek external resources for satisfying IS requirements, whether for application development (software) and/or infrastructure (hardware) needs and where by the outsourcing partner is responsible for managing

these components. This would not include procurement of software or hardware to be used and managed internally by the firm". This study used this definition as an IS outsourcing definition.

2.3 Reasons for Outsourcing Decision

As mentioned in the above section, different companies outsource differently. Accordingly, they have different reasons for making outsourcing decision. Outsourcing affects IT cost, IT performance and business cost. Different literatures suggest that IT outsourcing occurs when organizations have different reasons like financial motivations, unresponsive IS department, little need to control IS and if the activity is not core to them.

Most companies, according to James & Frederick (1994), uses outsourcing in order to control their resources through strategic outsourcing by using methods like defining and developing a few and well-selected core competencies that are significant enough to their customers and which helps the company to be best in world. Focusing investment and management attention on those core competency activities and strategically outsourcing many other activities where it cannot be or need not be best when performed in house.

There are different financial motivations of outsourcing to save costs of different IT activities. Hardware costs, software costs, IT personnel costs and business operations costs are major areas that were suggested where IT and business costs could be decreased by the outsourcing activity (Kerry, Barbara, & Paul, 1995; Brown & Scott, 2005). These cost savings are directly related to efficiency and effectiveness improvements of the organizations. The authors also added that the responsiveness of internal IS department, out of control costs, flexible systems and politics (reacting to management's preferred directions) as another financial motivations towards IS outsourcing in banking sector. Banks use these financial motivations as mechanism to encounter potential cost problems or as a mechanism to enhance their performance further.

Organizations also outsource their IT/IS activities due to strategic motivations. Changing organizations boundaries, restructuring, mitigate technological risk and uncertainty, accessing new technology, improve IS management and linking IT and business strategy were mentioned as strategic motivations of banks to outsource their IT/IS activities (Kerry, Barbara, & Paul, 1995).

Kerry et al. (1995) studied financial motivations behind IS outsourcing and reported that IS outsourcing increased the profitability of banks by 10% averagely. They mentioned also that the

outsourcing reduced the in-house costs by 18% and those banks in that study believes bringing IS back in-house would be impractical and they prefer looking for another vendor than bringing IS in-house in case they could not continue with their current vendors due to different reasons.

Coming to Ethiopian context, Muluneh (2009) mentioned reasons for IT Outsourcing as lack of experienced in-house developers, the sophistication of the system, the need to have the system implemented in a short period as well as the need to own a world-class technology. Iyasu (2017), also mentioned different reasons like need for standard systems, need for new services and external forces recommendations for IS outsourcing, in his study on challenges and benefits of outsourcing.

As it can be seen from the below figure, motivation of outsourcing is now moving from cutting-cost to other benefits like enabling focus on core business functions and solving capability issues (Deloitte D. L., 2016).

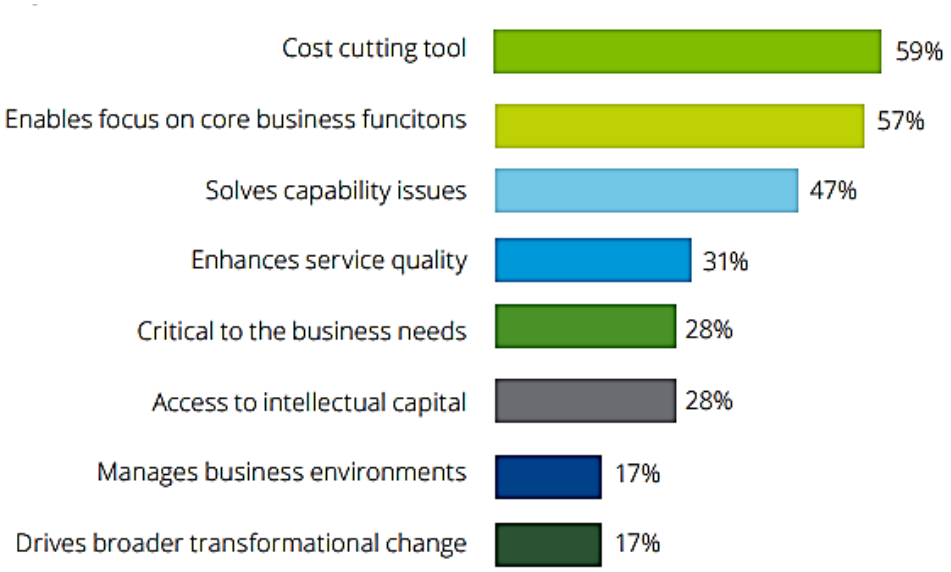

Figure 2-1 Reasons for Outsourcing: adopted from (Deloitte D. L., 2016)

Other reasons for using the outsourcing are considered the superior competency, asset transfer, utilization improvement, economy of scale and business risk mitigation (Doval, 2016). Nevertheless, the best way to make the outsourcing decision is to balance between the opportunities and risks of outsourcing (Leavy, 2004). Brown & Scott (2005) listed to acquire new skills, acquire better management, focus on strategy, focus on core functions, avoid major investments, assist a fast-growth situation, handle overflow situations, improve flexibility, improve financial ratios, launch a new strategic initiative, improve overall performance, reduce

costs, enhance credibility and jump on the outsourcing bandwagon as the most common reasons of outsourcing.

2.4 Types and Levels of Outsourcing

There are many forms of outsourcing and many ways to employ it strategically as a management tool. According to Willcocks, Fitzgerald, & David (1995), there are three kinds of outsourcing. The first kind of outsourcing is incremental outsourcing where an organization starts outsourcing with small and an obvious discrete area. Main reasons of this kind of outsourcing is usually to save costs, lack of internal expertise and inability to retain the IT staff required. Hard learning is the second type of outsourcing in which organizations start outsourcing with large scale of activities with little experience of managing it and make many mistakes over many years and contracts. This could possibly take from four to eight years in which organizations learn how to draw and manage outsourcing contracts and understand the need for outsourcing strategy that fits their business requirement from Information Systems. The third type is a strategic approach where the focus is on how outsourcing fits with what the rest of the business is doing and how IT outsourcing can be managed. It is not mandatory for this type of outsourcing to be a large-scale outsourcing.

According to Brown & Scott (2005), there are three levels of outsourcings. The first level is tactical outsourcing which takes place in order to solve specific problems faced by an organization while the organization is already experiencing the troubles like the lack of financial resources to make capital investments, inadequate internal managerial competence, an absence of talent, or a desire to reduce headcount. This level of outsourcing focuses on contract, specifically, constructing the right contract and, subsequently, holding the vendor to the contract. This first stage of outsourcing involved doing the work under the existing rules. Strategic Outsourcing is the second level outsourcing according to them. It is a relationship between an organization and business partners to build a long-term value that with an emphasis on mutual benefit. In this kind of relationship, corporations work with few but best-in-class integrated vendors than working with large number of vendors to get job done. This second stage used outsourcing as part of the process of redefining the corporation involving many organizational restructurings. The third level outsourcing is transformational outsourcing. This stage of outsourcing used for redefining the business in order to survive economically. The authors argued that organizations must transform themselves and their markets in an ever more daunting challenge to redefine the business world before it redefines

them by using outsourcing as a powerful tool and recognizing service providers as powerful forces of change because the real power of this tool lies in the innovations that outside specialists bring to their customers' businesses.

2.5 Strategic Outsourcing

IT outsourcing is a strategy for managing the delivery of IT services. Like all other management strategies, the key of successful IT outsourcing lies in how the strategy is planned, implemented and managed to move the organization from its current state to its future vision state. Therefore, it acts as a transition path towards the vision, not the end state (Cullen & Willcocks, 2003).

As mentioned in the previous section, in the early stages of outsourcing, IT outsourcing was aiming at lowering cost. Today however, outsourcing motivation is more strategic in nature with the goal of improving the business' competitive advantage (Jerry & Jo Ann, 2005). According to WGroup[1](2017), organizations outsource activities to create value and fundamentally change the way they do business. Moreover, innovative and truly successful organizations use outsourcing as a way that enables them to enhance service delivery, accelerate time-to-market, implement new technologies, foster innovation, and make smarter decisions.

Even though organizations use outsourcing for different advantages as mentioned above, most of them are using it without defined strategy. However, outsourcing without strategy negatively affects both suppliers and customers. If suppliers drift into outsourcing without strategy and understanding what their customers need is, they can lose a lot of money. One IT director in (Willcocks, Fitzgerald, & David, 1995) research put this clearly that their vendor lost a lot of money by not knowing what the organization wanted. The contract was a fixed price and it was biased towards the organization, but this resulted in bad relationship with the vendor. Even a sourcing strategy that is built with wrong approach do not create value to the organization, rather it destroys it which will lead to years of recovery (WGroup, 2017).

If all suppliers were totally reliable and efficient enough, organizations would outsource all non-core competency activities. Since most suppliers are not reliable, imperfect and entail some risks

[1] WGroup is a management-consulting firm with a peer-to-peer approach to IT optimization and service delivery transformation. The team is composed of consultants with over two decades' experience as former C-suite executives and IT leaders.

to both buyers and sellers, managers need to consider three points regarding the activity to be outsourced (James Brain & Frederick, 1994).

- ✓ First, what is the potential for obtaining competitive advantage in this activity, taking account of transaction costs?
- ✓ Second, what is the potential vulnerability that could arise from market failure if the activity is outsourced? These two factors are represented by simple matrix in the figure below. As both of potential vulnerability and competitive edge goes higher, companies need to control highly their outsourcing strategically.
- ✓ Third, what can we do to alleviate our vulnerability by structuring arrangements with suppliers to provide appropriate controls yet provide for necessary flexibilities in demand?

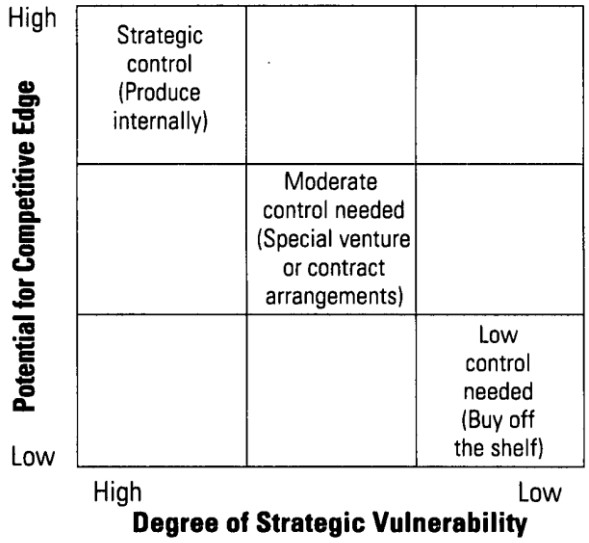

Figure 2-2 Competitive advantage vs Strategic vulnerability – adopted from (James Brain & Frederick, 1994)

2.5.1 Competitive Edge

Activities that do or could create a unique value for the organization and activities that could be bought from outside for the effectiveness of an organization should be carefully considered by managers. The effective core competencies according to (James Brain & Frederick, 1994) include the followings:

- ✓ Knowledge sets not products, as products could easily be back-engineered, duplicated or replaced by substitutes.

- ✓ Some managers concentrate only on a narrow view of products that in might not fit customer needs in near future. In order to have a successful core competency strategy however, they need to focus on flexible skill sets and constant, conscious reassessment of trends so that they could be capable of adaptation or evolution.
- ✓ An organization should focus on limited number of activities, as every activity needs management dedication and intensity so that they could be able to match the performance of other more focused competitors.
- ✓ Managers need to have effective strategies to seek out places where there are market imperfections or where there are knowledge gaps that their company is qualified enough to fill.
- ✓ Focusing on areas where the company can dominate other companies with the same or similar products. Because, focusing on activities that the company can perform than other competitors, that are important to customers, enables the company to make more money than its competitors.
- ✓ Understanding and serving customers by knowing elements that are important to customers over a long period. However, even many high-tech companies with the world's best state-of-the-art technologies often fails when they ignore this.
- ✓ Some companies depend on individuals for their existence. However, when the strategy is dependent on creativity, personal dedication, and initiative firms need to capture core competencies by recruiting, training, marketing, innovation, motivation systems, or control of remote and diverse operating sites within a common framework and philosophy.

Whether an organization can achieve a maintainable competitive edge by performing an activity in house on continuous bases is the key strategic issue between insourcing and outsourcing. Organizations should first define and identify their core competencies and then identify which of those core competencies can be performed in house or outsourced.

Organizations need to serve their customers effectively and efficiently. According to general systems theory, effectiveness is defined as the degree to which the actual outputs of the actual correspond to its desired outputs and efficiency is defined as the ratio of actual outputs to actual inputs. Many organizations put their effort more on their efficiency by only focusing on making their day-to-day more smooth (Charles & Dan, 1978), which leads what Iyasu mentioned as a 'fire-fighting' scenario at National Bank of Ethiopia (Iyasu, 2017). However, it is better for

organizations to focus on their effectiveness as it guarantees their future long-term success. To elaborate this Peter Ducker suggested, which was used by Charlers & Dan (1978), "It is important to do the right things (improve effectiveness) than to do things right (improve efficiency). Therefore, if an organization is doing the right things wrong (i.e., the organization is effective but not efficient), it can outperform other organizations that are doing the wrong things right (i.e., organizations are efficient by not effective).

One good example for the above scenario could be what happened to Baldwin Locomotive, the premier manufacturer of steam locomotives during 1930s. This company was the most efficient manufacturer of steam locomotive until World War II. However, after World War II, the company was thrown out from locomotive industry as diesel and electric locomotives replaced the need for steam locomotive. The company was successful until it was replaced by these other locomotive products. It was driven-out of the market because it was not studying what was happening in the locomotive industry (Charles & Dan, 1978). Therefore, organizations need to be able to adapt to their environment to survive. The basic characteristics of the match an organization achieves with its environments is called strategy. Strategy serves as a tool that managers use to coping with external and internal changes.

In general, managers should strategically develop their core competencies, strategically block competitors, and avoid outsourcing those core competencies or giving suppliers access to the critical skills to their core competencies.

2.5.2 Transaction Costs

Organizations should analyze both transactional costs of internal and transaction costs related to external. By any means, the transaction costs of internal should at least match with those of the best external supplier; otherwise, it will be reason for losing a competitive edge for the organization.

2.5.3 Vulnerability

Organizations should consider three different factors related to market before outsourcing an activity or product. The first factor is maturity of the market. If market is not mature enough (few suppliers or immature capabilities (Cullen & Willcocks, 2003)) for an activity or product that an organization need to outsource and that activity is not one of the organization's core competencies, the organization should consider retaining it in house. The second factor is number of suppliers

and their capabilities. If there are not enough suppliers in the market and that activity or product is not one of its core competencies, an organization should consider performing that activity in house than giving it to weak suppliers up to needed performance levels. Another possible vulnerability is lack of information of marketplace or individual supplier. For example, suppliers may hide their internal problems that might cause big problem to buyers until it is too late for buyers to go elsewhere.

2.5.4 Degree of Sourcing Control

Managers have a wide range of control options of outsourcing. If there is high vulnerability and high potential for competitive edge, tight control is required. If the reverse is true, there might be little need for control. Between these two extremes, there are wide range degree of control to balance intermediate levels of vulnerability against more moderate prospects for competitive edge in which multi-tier strategy might be required (James Brain & Frederick, 1994).

2.6 Advantages, Disadvantages and Challenges of Outsourcing

Many companies outsource IT services because they need to focus their attention and resources on their business, rather than technology. As mentioned in section 2.3, organizations outsource their IT due to different reasons. One those reason is lack of the skills or knowledge to handle IT issues. Outsourcing IT can be one of the most intelligent decisions managers make for their business. However, business they must understand the advantages and disadvantages of outsourcing services prior to signing an outsourcing agreement.

2.6.1 Advantages

Through outsourcing, organizations can have access to larger technology pools, providing the ability to develop products, which could not have been developed internally. This shortens cycle times and reduced development costs, so that companies could gain competitive advantage (Jerry & Jo Ann, 2005). Doval (2016) concentrates main advantages of the outsourcing into four directions: cost reduction, increased productivity, jobs balance and the management flexibility and risk avoidance.

Giving access to the state-of-the-art technology, cost savings and quality, enabling organization to focus on strategic and core issues than non-core issues, increasing flexibility and overcoming lack of internal expertise and capacity are another major advantages of outsourcing (Iyasu, 2017).

According to Deloitte (2016), cost saving is still leading the role in outsourcing. However, other benefits of outsourcing like enabling to focus on core business functions, solving capability issues, enhancing service quality, being critical to the business needs and access to intellectual capital are also mentioned as growing role of ITO.

As depicted in figure below, organizations are redefining the benefits of outsourcing by asking their service providers to add value in ways beyond cost cutting, such as enabling mergers and acquisitions (M&A) activity, providing needed capacity, and advancing functional capabilities (Deloitte D. L., 2016).

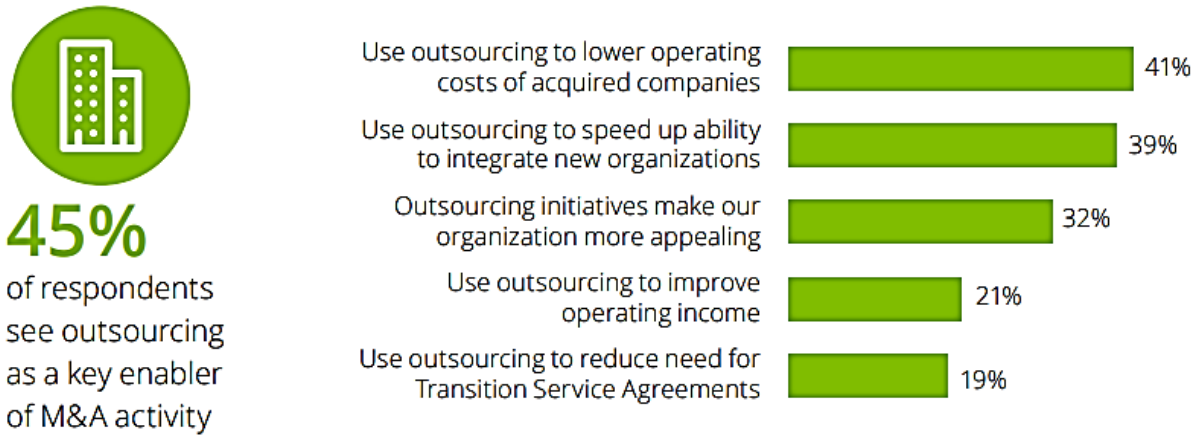

Figure 2-3 Outsourcing is a key enabler to M&A activity and has the ability to deliver tangible benefits for well-informed organizations -- adopted from (Deloitte D. L., 2016)

2.6.2 Disadvantages

Although outsourcing of Information Systems services has benefits, there are also challenges that should be considered by client organizations. Regarding the companies running their business out of their home countries, the most important disadvantages of outsourcing are the downsizing with the consequence the unemployment rate increasing in those countries and the business uncertainty and risk threat in the host country (Doval, 2016).

Lack of compliance with the contract by the provider and the inability to control quality, loss of technical knowledge, provider's inability to adapt to the new technologies, security related

problems and no easy exit are mentioned as other disadvantages and challenges of it outsourcing (Iyasu, 2017).

Additionally, the "chemistry" may be lacking between the vendor and client. The danger of depending on a third party for your critical information need can be scary. Outsourcing may lead to the loss of a capability that could potentially be a key success factor. It can also lead to loss of control of IS/IT assets, loss of flexibility, loss of competitive advantage in information management, loss of IT expertise and corporate memory. There are possible threat of opportunism from suppliers. It can cause a decline in morale and performance of the remaining employees and long-term cost savings are not guaranteed (Lacity & Hirschheim, 1993; Hoffman & Vijayan, 1997).

2.7 Emerging Trends in Outsourcing

According to Deloitte's 2016 global outsourcing survey, the market for outsourced services will likely continue its rapid adaption to meet the demands of the customer. It is reported that while the regulatory environment has changed quite significantly for some industries since 2014, there is still significant strength in the outsourcing market (Deloitte D. L., 2016).

Outsourcing is revolutionizing the way business is done in almost all sectors. According to Deloitte's report, mentioned by (Outsourcing, 2018), 31% of IT services has been outsourced in year 2017. It is 36% and 30% in healthcare sector and finance sector respectively. 32% in HR sector and around 43% in manufacturing sector. They also mentioned that it will continue to grow in future.

From the report of global outsourcing survey done by Delottie in 2016, there were three key trends emerged. The first one is companies were broadening their approach to outsourcing as they begin to view it as more than a simple cost-cutting play. The second trend was organizations were redefining the ways they enter into outsourcing relationships and manage the consequent risks. The last trend was organizations were changing the way they were managing their relationships with outsourcing providers to maximize the value of those relationships.

2.8 Outsourcing in Banking Sector

According to a study done in aims to aid in understanding the motivations for information system (IS) outsourcing decision and its initial implementation at one of the top commercial banks in

Malaysia, the motivating factors are the focus on core competencies, turning non-profit activities into profit-generating activities, and cost reduction. The implementation strategy involves the setting up of a two-tier relationship between the bank and the service provider. The challenges involved in the transition phase include managing the partnership and handling the staff transition and morale (Mohd, Husnayati, & Muzzafar, 2007).

Another research was done in the year 2012 to explore the state of Information Systems Outsourcing in Croatian banks, changes in scope of outsourcing, reasons for outsourcing and perception of outsourcing-related risks from 2005–2012. The result shows that better focus on (provision) of core banking and financial services, cost reduction, better control of operating expenses, freeing up resources for other projects, lack of necessary expertise and resources, business processes reengineering, better service and access to new technologies are mentioned as reasons for it outsourcing. Loss of control over contracted services, operational, loss of knowledge and skills within the bank, financial risk, reputation risk, legal risk, risk associated with the country of origin of the service, risks related to security of information systems, cultural and social issues (employee resistance, differences in approach to clients ...), technical limitations, decline of service quality, data confidentiality breach and strategic risk are found as an it outsourcing risks.

2.9 Related Works on IT/IS Outsourcing

2.9.1 In Africa

According to a study done on a review of Information System outsourcing in Africa, Information System development outsourcing is growing with accelerated speed in Africa. This is due to increased awareness of advantages of using outsourcing, the fast spread of globalization, attention given by many African governments to the development of Information System, strong need to access the latest technologies due to rapid changes in Information Technology like cloud computing, web services, mobile computing, and other areas. To be competent in global market, African organization are outsourcing their IT activities to gain from its advantages (Nduwimifura, 2015).

2.9.2 In Ethiopia

Not enough studies have been done in Ethiopia on the topic of IT/IS outsourcing. Meresea (2007) studied the top business functions outsourced by Ethiopian organizations. In his study, he put outsourced business functions in ascending order as maintenance and janitorial service, security service, and information technology. He also indicated that among the organizations investigated, 93% of them are willing to outsource security service, 83% of them are willing to outsource maintenance and janitorial service and 76% of them are willing to outsource information technology. His study shows that IS/IT outsourcing takes the third place regarding the organizations interest to outsource their business functions. This study

Muluneh (2009), studied Management of Information Systems Development Outsourcing in Ethiopia: the case of the Ethiopian Telecommunications Corporation, now ethio telecom. He used qualitative research approach and found that the organization outsourced their IT/IS services due to lack of experienced in-house developers, the sophistication of the system, the need to have the system implemented in a short period as well as the need to own a world-class technology. The organization preferred customization of the system that their vendor provided rather than developing new system from scratch. This was due to the urgent need of the system. However, they did not use any outsourcing strategy that could help the corporation to end up its relationship smoothly. Though they rush into customization rather than developing from scratch, finally they failed to meet schedule, cost, requirements, and envisioned results from the very beginning. His study pioneered IT/IS outsourcing study in Ethiopia have listed some internal outsourcing factors.

Bezawit (2017) IT project outsourcing risk management process model from the client and vendor perspective in the case of Ethiopian banking sector using mixed research approach and pointed out that communication and partnership approach between two parties are essential factors to ensure the sustainability of IT project outsourcing. Her study focus was on studying the risk management process. She has discussed some internal risk factors such as lack of experience and expertise with project activities, lack of top management support and client readiness.

Iyasu (2017), studied benefits and challenges of outsourcing in National Bank of Ethiopia using qualitative approach and found that the Bank has been benefiting from outsourcing its Information System development. These benefits include Easy access to technology, management of business process that enabled managers to focus on core areas, sharing risks with service provider and

vendor access to technical talent and skill transfer and business user satisfaction from some outsourced systems.

Outsourcing IT activities also have many challenges like lack of IT outsourcing strategy, total/partial IT project failures, absence of project manager, Poor contract and Service Level Agreement management and the inability to understand them. Absence of timely decision by management, poor communication with vendors and the inability to control them, less business users' participation in project requirement gathering and lack of internal capability that results in total dependency on vendor are mentioned as challenges face by National Bank of Ethiopia (Iyasu, 2017). This study have pointed out these challenges from the internal factors perspective. However, the Bank's outsourcing could also be affected by more factors such as industry factors which affects the banking industry. Additionally, other external factors such as government regulations and economic factors were not studied with his study.

2.10 Summary

One of the objective of the thesis was to review different IT outsourcing practices. In this chapter, different topics related to IS outsourcing like definitions, reasons and types of outsourcing, advantages, disadvantages and risks of outsourcing, emerging trends in IS outsourcing and related works were discussed in order to understand IT outsourcing and its practices by different organizations.

Diverse definitions of IT outsourcing were reviewed in order to acquire knowledge of IT outsourcing from different authors views. It has been also indicated in this chapter that organizations practice IT outsourcing differently with different reasons like financial motivations, strategic motivations, solving capability issues, unresponsive IS department, access to intellectual capital, little need to control IS and if the activity is not core to them.

It has been also found from this literature review that organizations are practicing different types of IT outsourcing at different levels. Incremental, hard learning and strategic approaches were indicated as the three types of IT outsourcing practices, while tactical, strategic and transformational outsourcing are mentioned as levels of IT outsourcing being practiced by organizations.

Since IT outsourcing is a strategy for managing the delivery of IT services, strategic outsourcing practice is has also been reviewed. It haven been indicated in the review that organizations have acquired different advantages, disadvantages and faced challenges while practicing outsourcing. After reviewing emerging trends in outsourcing, review of outsourcing in the banking sector have been done since this research is focused on the banking sector. IT outsourcing related works were also reviewed from the context of Ethiopia.

It has been indicated in the review that in Ethiopia, IT outsourcing is practiced due to reasons like lack of experienced in-house developers, the sophistication of systems, the need to have a system implemented in a short period as well as the need to own a world-class technology. As it has been happening elsewhere, there are advantages, disadvantages, challenges and risks faced by organizations practicing IT outsourcing in Ethiopia.

Chapter 3

Conceptual Framework of the Study

The environment creates both opportunities and threats for organizations. Some organizations have been transformed by environmental change while others have jumped suddenly to global scale. According to Johnson, Whittington, Scholes, Angwin, & Regnér (2017), environments can be considered in terms of a series of 'layers'; the Macro-environment layer, Industry (or sector) layer, Competitors layer and the Organization layer. Outsourcing organizations also operate in such an environment.

Information Systems projects are outsourced in order to meet a goal. Since IT is crucial for the success of an organization, decision related to it will affect the activities of all the organization's departments. Therefore, it is apparent that the rationale to outsource must be clearly established. On the other hand, there are high degrees of failures in outsourcing contracts which makes the rationale to outsource assumption to fall into question. Greaver (1999), argues that poor decisions at the beginning of an outsourcing initiative have a tendency of leading into later problems by bearing high cost of outsourcing mistake that can be significant and difficult to reverse or recover from it.

Additionally, the state of practice with respect to decision-making of IT outsourcing project initiation is largely unknown. According to Iyasu (2017), there is no defined IS outsourcing strategy in NBE and many of the bank's IT projects are not considered successful. Hence, studying the underlying internal, industrial and external factors affecting IS outsourcing might reduce the rate of project failures and pave the way to achieve the actual goal of outsourcing. Although many practitioners and researchers argue that ITO decisions are driven by strategic reasons, truly strategic reasons for outsourcing IT have been relatively under-studied (Lacity M. , Khan, Yan, & Willcocks, 2010).

Information Technology Outsourcing Factors

The study divided ITO factors into three namely: external, industry and internal factors. The following sections discusses these factors based on the classification of Johnson, et al. (2017) classification of business environment into four layers. The competitor layer is left out from this

study as NBE has no competitors. In the following sections, previous studies, which have been separately studied factors mostly, in other countries are presented to support the conceptual research model of this study.

3.1 External Factors

External factors are defined as changes in the business environment that foster both threats and opportunities for an organization and are usually beyond the control of management. They impact to a greater or lesser extent many organizations, industries and sectors (Johnson, Whittington, Scholes, Angwin, & Regnér, 2017). The literature on external determinants of ITO decisions is scarce (Lacity M. , Khan, Yan, & Willcocks, 2010; Blaskovich & Mintchik, 2011). To analyze these external factors, frameworks such as the PEST (Political, Economic, Social, Technological) model are used (ITIL, 2019).

3.1.1 Political Factors

Government regulations and restrictions: - governments interfere in company's outsourcings. For example, some governments do not allow foreign firms to operate in local telecommunication networks or IT products/services import/export, and limiting internet-based information exchange activities (Tan, Mueller, & Foster, 1997). Others also pointed out that governmental pressure have significant influence on outsourcing adoption (Hsu, Ray, & Li-Hsieh, 2014). However, it has been found that the freer the country is from government interference, the greater the ability to engage in off-shore transactions. On the other hand, incentives designed to keep business at home may discourage off-shore activity (Donald A. & Vijay K., 2010).

Legal and political uncertainties: - Legal and political uncertainties in domestic markets may also drive sourcing decisions. Public perception and public's anti-offshoring views in countries such as the United States and the United Kingdom (Lacity M. , Khan, Yan, & Willcocks, 2010) might affect sourcing decisions within client locations.

Intellectual property rights: there are emerging legal challenges for IT-enabled services industry. Loss of intellectual property is one of the risks of ITO (Romaniello & Medlin, 2010) and hence, some firms worry about weak intellectual property protections and do not want to risk losing a strategic formula or manufacturing advantage because of outsourcing. Issues of intellectual

property are currently coordinated by the World Intellectual Property Organization (McCoy & Sarx, 2010).

3.1.2 Economic Factors

IT labor shortage: - lack of professionals with key technical skill is seen as common global problem for many companies. They require highly skilled workforce (Lacity, Rottman, & Khan, 2010) and the shortage of highly skilled professionals was mentioned as one of drivers of ITO (Lacity M. , Khan, Yan, & Willcocks, 2010). Additionally, firms attempt to obtain added benefits by outsourcing because of the perceived 'failure' of internal IS departments (Dibbern J., Hirschheim, & Jayatilaka, 2004).

Labor costs: IT/IS projects are both labor-intensive and always under vigorous time constraints. Achieving project goal on time, budget and quality needs high labor cost. Outsourcing companies have years of experience with relatively lower cost than doing the activity internally. It is claimed in many articles that cost reduction is the primary driver of outsourcing (Dibbern J., Hirschheim, & Jayatilaka, 2004; Lacity, Rottman, & Khan, 2010). For example, the difference in labor cost of developed countries and developing countries; what costs $25 in U.S. might only cost 1$ in developing countries (Donald A. & Vijay K., 2010).

Quality of labor force: The greater the level of education and training of a country's workforce, the lower the costs of adjustment (Donald A. & Vijay K., 2010).

Volatility in IS/IT job market: researches show that IS job positions with a volatile demand in the job market are more likely outsourced than those with a stable demand, and that jobs requiring relatively abundant skills are insourced more than jobs requiring scarce skills (Slaughter & and Ang, 1996).

3.1.3 Social Factors

Organizations might select an international vendor due to cultural proximity which involves how similar or different two cultures are. Earlier researches into offshoring revealed that cultural proximity related to job expectations, contractual obligations, communication styles, and even language can have a major effect on offshoring practices (Beizer, 1990; Kogut & Singh, 1988;

Levina & Vaast, 2008). According to studies half of virtual international IT projects time is spent on ad hoc interactions of which 57% of it is spent on coming to a common understanding of what was expected of the involved parties. In general, the greater the similarities between the cultures interacting—or the greater the cultural proximity—the fewer problems tend to arise in offshoring situations. The more different the cultures interacting—or the smaller the cultural proximity/greater the cultural distance—the more communication- and transaction-related problems tend to occur (Ang & Inkpen, 2008; Donald A. & Vijay K., 2010).

3.1.4 Technological Factors

Perceived technological benefits: both tangible benefits like time and cost savings, access to specialized resources and intangible benefits such as the focus on core-competencies, access to specialized resources, quality improvements, and so on have demonstrated as the principal motivators of ITO (Liang, Wang, Xue, & & Cui, 2016).

Perceived complexity: Rogers (2003) believed that due to lack of required skills and knowledge, perceived complexity leads to resistance to the use of new technology. Concerning ITO, complexity concerns the extent to which the outsourcing task is sophisticated and difficult to standardize, requiring a great deal of specialized knowledge to undertake the task that negatively influences the ITO adoption level.

Technological uncertainty: IS contains a large component of technological uncertainty with its rapidly changing foundation. Technological uncertainty poses a risk to firms and outsourcing provides an opportunity to mitigate the risk. Managers claimed outsourcing to be a means of reducing technological risk and uncertainty (Dibbern J., Hirschheim, & Jayatilaka, 2004).

3.2 Industry Factors

The industry, or sector, consists of organizations producing the same sorts of products or services (Johnson, Whittington, Scholes, Angwin, & Regnér, 2017). Similar factors can possible affect the industry's operations.

Supplier competition. Transaction Cost Theory (Williamson, 1976) suggests that a high number of potential suppliers lowers switching costs in the event of terminating a contract, and thus

positively affects ITO (Ang & Cummings, 1997). In other words, the presence of competition reduces the vendor's bargaining power and prevents the vendor from **locking in** the customer (Lacity & Hirschheim, 2003). On the other hand, a successful number of prior projects tends to increase the bargaining power of the vendor since this leads to a lock-in effect (Gopal, Sivaramakrishnan, Krishnan, & Mukhopadhyay, 2003). Outsourcing in a non-competitive market (or even relying on a single vendor in a competitive market) presents the organization with a high degree of risk (Poston, Kettinger, & Simon, 2009).

Mimetic influence: Organizations imitate their peers' initiatives based on the perception that the experience of peer organizations is an adoptable success story for them. At least five studies analyzed ITO from a "social system level" and found positive and significant effects on IT of mimetic behavior on ITO decisions (Lacity M. , Khan, Yan, & Willcocks, 2010).

3.3 Internal Factors

Organizations are looking at internal factors when considering outsourcing. These include the need to sustain 24/7 operations, perceived improvements in IS flexibility and agility (Djavanshir, 2005) and the internal relatedness of the processes being outsourced (Gable & JA, 1992; Bahli & Rivard, 2003). Processes that are outside the normal operations of a company, or that are not deemed a good fit with the core operations of a business model are more likely to be outsourced. Other internal factors may include an organization's expertise with outsourcing in general, or in a specific related area, as well as the organization's expertise in IS operations (Djavanshir, 2005). It is more likely that organizations that have little familiarity with IS operations will outsource those functions.

In general, using the above-mentioned factors, this research is framed within the following research model as shown in the Figure 3-1 below. The purpose of the research model is to clarify concepts, guide the study and provide a context for interpreting the study findings.

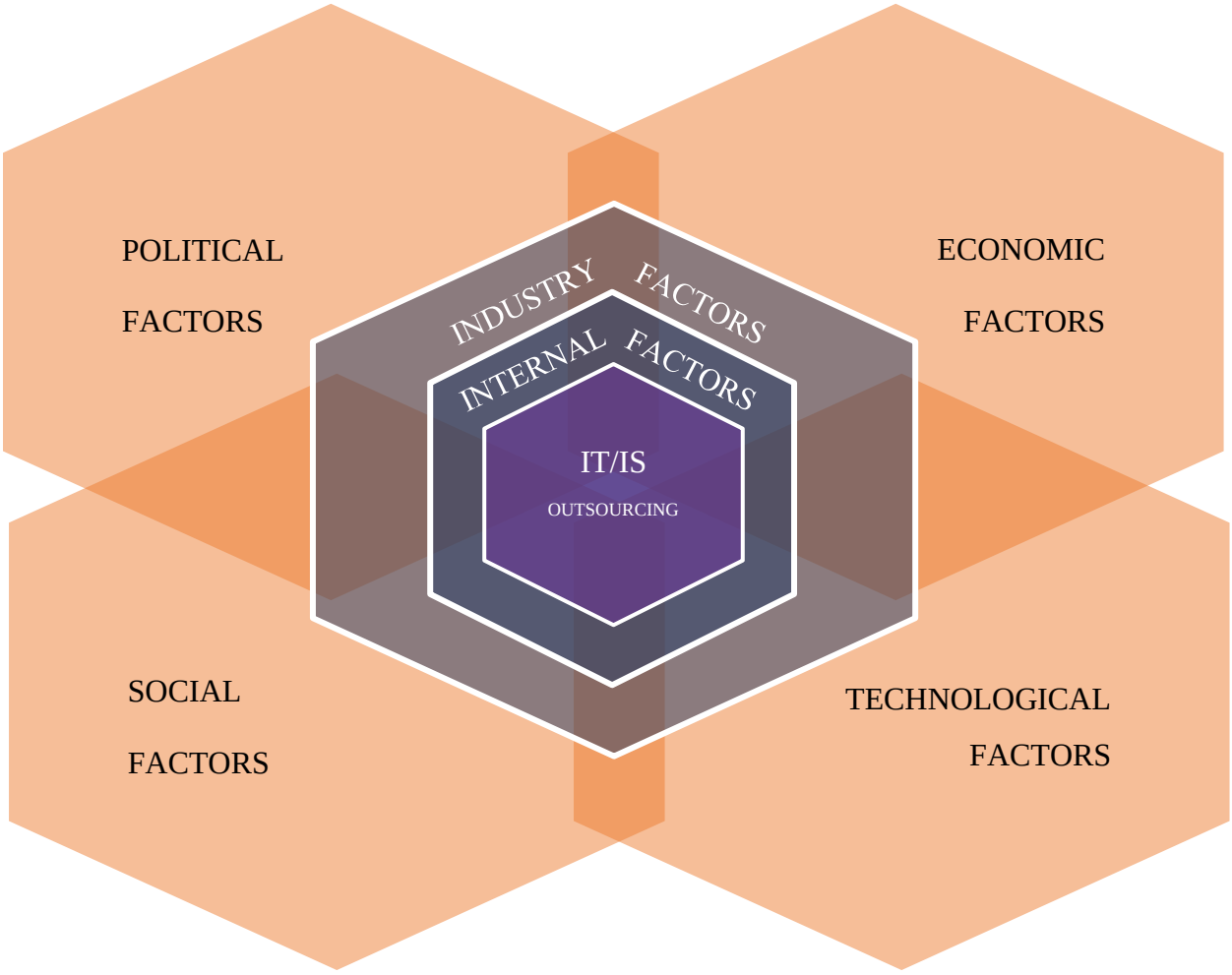

Figure 3-1 Research Model – Factors Influencing IT/IS Outsourcing (Source: developed based on the Johnson, et al. (2017) classification of business environment)

Chapter 4

Research Methodology

4.1 Overview

The research methodology (research approach) is the philosophy or general principle which guides the research (Dawson, 2002) to systematically find things out based on the research questions and objectives of research (Hancock, Ockleford, & Windridge, 2009). According to Creswell (2014), there are three research approaches; namely, qualitative, quantitative and mixed approaches.

This study employed the qualitative approach due to the following reasons. Hancox & Hackney (2001) pointed out that when the central concern of a study is not to generate findings of statistical significance which proved or disproved causal relationships rather to get a better understanding, qualitative research can be used as an approach. Kini (2007) pointed out that it can also be used when the emphasis of the study is on discovery and understanding of the knowledge and experience of experts. Hancock, Ockleford & Windridge (2009) also indicated that if data to be collected cannot be expressed in number, qualitative research approach is the right choice to go for. Moreover, Creswell (2014) and Berg & Lune (2017), suggested that when the study needs to detail understanding, it is better to use a qualitative approach. Thus, since objective of this study is to have a detailed understanding of factors influencing practices and experience associated with IT/IS outsourcing, and is not finding statistical significance of those factors, it employed a qualitative methodology as a general approach.

The other reason the study employed qualitative approach is because only little is known about IT/IS outsourcing of developing countries as most of studies on IT/IS outsourcings are mostly confined in the Western countries and studies indicated that the findings of could differ (Amid, Moalagh, & Zare, 2012). Ethiopia is one of the developing countries in world. Creswell (2014) emphasizes that when little is known about the research area, qualitative approach can be used to understand phenomenon.

4.2 Data Source

Qualitative research mainly works with two types of data; namely, verbal data and visual data. Verbal data is collected through interviews and visual data is collected through applying various

observational methods including documents (Flick, 2009). Creswell (2014) also mentioned that qualitative research uses interview data, observation data, document data, and audiovisual data.

At the time of the study, the case organization was outsourcing its system developments, system maintenance/support, network and infrastructure design and support as well as many other IT services. Within the directorate responsible for handling all IT related issues, there were three IT managers who were responsible for managing these outsourced systems and services. Hence, they were the primary data source for the study. In addition to those IT managers, different documents which are discussed under the document review section were used to support the interviews data.

4.3 Data Collection Method and Procedure

A review of literature is done to gain knowledge and understand different concepts of outsourcing; motivations or drivers, functions to outsource and other related issues of IS outsourcing in general. Using different literature reviews, the study's research model was developed.

4.3.1 Semi-structured and Open-ended Research Question

One of data collection method for a qualitative research is an interview. Yin (2018) indicated interviews are an essential source of case study evidence because most case studies are about human affairs or actions. Though there are many types of interviews, unstructured, semi-structured and structured interviews are most commonly used. From these interview types, according to Dawson (2002), the semi-structured interview is the mostly used in qualitative research. Hancock & Algozzine (2006) mentioned that semi-structured interviews are particularly well-suited for case study research. It enables participants to articulate their own experiences rather than simply responding to the interviewer's questions. Hence, this study used semi-structured open-ended interview with three IT managers of Information Systems Management Directorate. Sequence of questions that were prepared based on the research model were asked in the same order, and all questions were answered with open-ended responses.

Though interviews well suit a case study researches, Yin (2018) pointed out that the interviewees' responses are subject to the common problems of bias, poor recall, and poor or inaccurate articulation. In order to overcome these problems and to make sure that the interview was correctly transliterated, the researcher sent the transcribed version of their audiotaped interviews back to the interviewees.

4.3.2 Document Review

In addition to the above to methods, another reasonable approach to data collection is to corroborate interview data with information from other sources (Yin, 2018). Hancock & Algozzine (2006) also mentioned that case study researchers often review existing documents or create and administer new documents from which to gather information related to the research questions. Accordingly, NBE's ISMD budget document was reviewed in order to know what currency is used in planning the budget because the Bank have local and international vendors and their payments could be either in local currency and other currencies. SLA between NBE and Vendors was also reviewed to know whether it is detail enough to include holidays and other days for which vendors do not give support to the Bank. The National Information and Communication Technology (ICT) Policy and Strategy was downloaded from the official website of MCIT which is publicly available and reviewed to know the Government's view towards intellectual property rights protection and towards strategic role of human capital development in ICT in Ethiopia. Lastly, Federal Public Procurement Directive which was downloaded from Ministry of Finance and Economic Development official website that is publicly available was reviewed to know reasons for bidder disqualifications.

4.4 Target Population and Sampling Technique Used

In selecting interviewee, though their availability is important, the most important consideration is identifying who may have the best information with which to address the study's research questions (Hancock & Algozzine, 2006). The primary source of information for this research was selected based on this consideration. Accordingly, Management of National Bank of Ethiopia particularly Information System Management Directorate was selected for the interview. From the department three IT managers were selected purposively due to their exposure to and more than ten years experiences with the Bank's Information Systems outsourcing than all the other ISMD staffs.

4.5 Data Analysis Technique

The data collected were analyzed as per the objectives of the study. There are many different methods of analysis in qualitative research, the common thread is that all qualitative method of

analysis is concerned primarily with textual analysis whether it's verbal or written (Creswell, 2014). The researcher has adopted the Creswell qualitative data analysis technique to analyze the collected data and reach at the conclusion. The Figure 4-1 below shows all the steps used for data analysis discussed here.

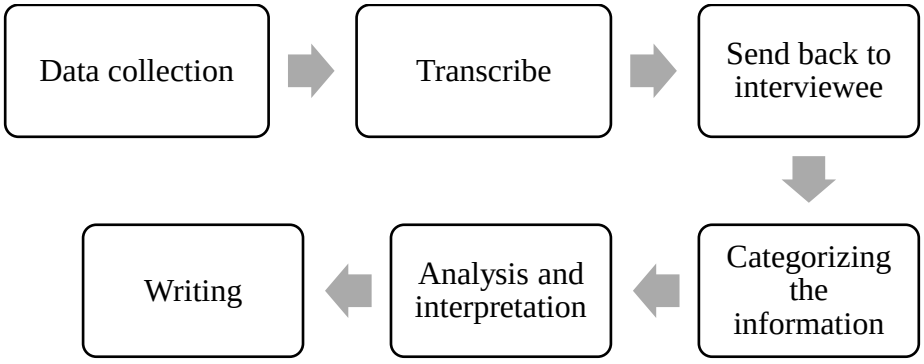

Figure 4-1 Qualitative Research Analysis Steps : Adopted from (Creswell, 2014)

Data Collection: the researcher understands the study phenomenon through data collection methods including interview and document reviews. In this study primary data were gathered from selected IT managers through semi-structured interview. To support their interview results, additional data were collected using document reviews.

Transcribe: audio data collected through interview was transcribed into written form.

Send Back to Interviewees: in order to avoid bias and misunderstanding of their ideas, the transcribed version of their interviews was sent to each interviewee.

Categorizing the information: After getting confirmation from them with minor corrections, the next step was categorizing the collected data through interview and document review where the researcher categorized the information according to the conceptual model of the research. A table was created which include a code names of interviewees, categories of factors, interview questions and their responses. Sample of the table is found under the appendix.

Analysis and interpretation: narrative analysis which was used to analyze text that came from transcripts of interviews and document reviews was done which was followed by comparison of the results with the results of other researches across the available literature according to the research questions and objectives of the study.

Writing the report: An interpretation of the findings was finally written based on the above steps.

4.6 Validity and Reliability of the Research Technique

According to Creswell (2014), qualitative validity means that the researcher checks for the accuracy of the findings by employing certain procedures, while qualitative reliability indicates that the researcher's approach is consistent across different researchers and different projects. He also mentioned that triangulation of data sourced using different sources is one of the ways of ensuring validity of data. Ardingly, this study used data from interview and document review in order to make the research more valid and accurate. As it was mentioned in the sampling section, those interviewees were selected for interview of this study were all selected due to their exposure and experience to the Bank's Information Systems outsourcing. There is no more reliable and valid data provider than those IT managers about the Banks' IT/IS outsourcing experience.

As mentioned by Creswell (2014), member checking, in which the researcher brings back polished or semi-polished findings of the research for accuracy, helps the qualitative research to be more accurate. Similarly, in this study, the collected data through interview was transcribed and then sent back to the interviewees to be checked for accuracy and avoid bias. Their interviews were presented in quotation when required.

Chapter 5

Data Presentation, Analysis and Discussion

In this chapter data collected from different data sources are presented along with analysis and discussions.

5.1.1 Data Collection Process

As indicated in the methodology part of the research, the study used interview as a primary data and document review as a secondary data, in the data collection process.

Three IT managers who have been directly taking part in the Bank's IT/IS outsourcing processes and currently managing outsourced applications, services and activities were interviewed. Though the interview with one of them was done smoothly, the other two were completed with different interruptions. This was because the researcher conducted the interview at their respective offices. There was a long phone call discussion with internal department, for which the researcher was forced to wait and continue his questions. Due to urgent issues happened at time of appointment, our appointments were cancelled at different times. Since the managers were busy and interviews were taking place on working hours, the researcher couldn't complete the interview at once. With one of them the interview was completed with three times interruptions. With the other one, the researcher completed the whole interview after meeting five times because he was so busy, having different meetings with both internal and external vendors at the time. On the other hand, these interruptions also created a room for the researcher to revise and shape the remaining question to the way the respondents understand more. The interview with him took a total of two hours, thirty-six minutes and eighteen seconds. With the other two, the researcher spent one hour, three minutes and seven seconds and one hour, forty-five minutes and ten seconds respectively. To support interview results, additional document reviews were also done.

5.2 IS/IT Outsourcing at NBE

All NBE's directorates, all banks in Ethiopia, Ministry of Finance and Economic Corporation, and Ethiopian Revenue Authorities are using systems that are being hosted by NBE. Micro-finance institutions and insurance companies are also about to start automated way communication with NBE through new systems under process. To serve all these stakeholders needs, the Bank is highly

dependent on IT/IS systems. Hence, the Bank, has been outsourcing different IS activities and services since the establishment of the Information Systems Management Directorate (ISMD) both to local and international vendors.

5.2.1 Outsourced IS Applications, Services and Activities in NBE

To play a vital role in achieving its envisioned outcome from its mission, vision and core values, the Bank's IT must be aligned with the Bank's business strategy. In order to bring this alignment and serve its internal and external stakeholder, the Bank's Information Systems Management Directorate is proving different types of Information System applications. Most of these applications, services and activities are outsourced both to local and international vendors. Table 0-1 shows summary of currently outsourced IS applications development/maintenance, services and activities in NBE.

5.2.2 NBE's IT/IS Vendors

As it can be seen from Figure 5-1 NBE has outsourced its different IS activities, services or functions to different local and international vendors. Systems are outsourced to different vendors in different manner. A single application could be outsourced to different vendors in terms of its applications development, application maintenance/support, database maintenance/support, infrastructure/network support and additional hardware maintenance/support like cheque scanner, for example in case of EATS.

EATS, is a national payment system, developed by an international company called Montran which is based in Cluj Romania. It went live May 27, 2011 replacing the manual payment clearing previously performed by NBE, for both high value payments and low value payments (such as credit transfers, direct debits and cheques). The system also integrates automated processing or transactions for Ministry of Finance and Economic Cooperation, ERCA (Ethiopian Revenues and Customs Authority) and ECX (Ethiopian Commodities Exchange). Its database and infrastructure support are outsourced to a local company called USI. The system has been using a Magtek Exella cheque scanner which was bought from another company called Magtek. The Bank gets support from the manufacturer of this scanner through Montran. The system also uses a third-party software called gateway application through which banks send and receive their daily transactions. Again, the bank gets support from this third-party application provider through Montran.

This system is used by internal and external users. Corporate Finance Directorate, Payment & Settlement Directorate and the Bank's CORE Banking System called QCBS are internal users of the system. All banks in Ethiopia, Ministry of Finance and Economic Cooperation (MoFEC), Ethiopian Revenue and Customs Authority (ERCA) and Ethiopian Commodities Exchange (ECX) are the current external user of the system. A secured connection with those users is not an option. Hence, ethio telecom is providing VPN connectivity and maintenance/support to connect all the banks head offices and other user organizations to system. Other systems like QCBS are also outsourced similarly to different vendors. Thus, it can be said that the bank is following a multi-vendor outsourcing approach.

Figure 5-11 below shows all NBE's IT/IS outsourcing vendors and their respective services they are giving to the Bank.

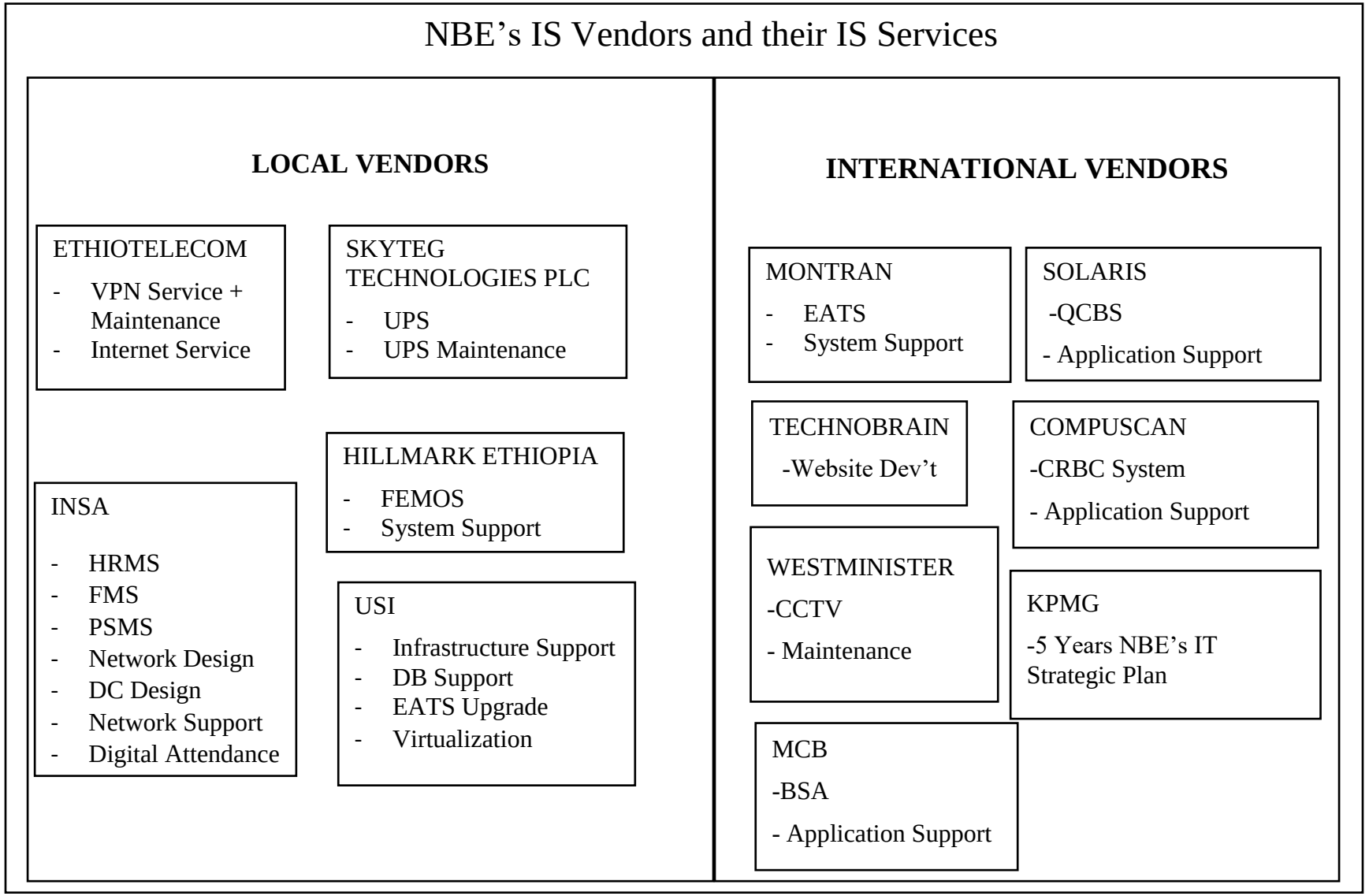

Figure 5-1 NBE's IS Vendors and their Services

5.3 Factors Affecting IT/IS Outsourcing in NBE

In the following sections, the study will present factors affecting IT/IS outsourcing in NBE as per our research model which is depicted in Figure 3-1 under the conceptual framework section.

5.3.1 External Factors

As a service provider, NBE cannot operate in isolation because it is affected by many external factors. The term 'external factors' here is used to represent factors that are not limited to a single industry and go far beyond one industry or sector, impacting a wide range of activities. Under this section, the study presents different external factors such as political, economic, social and technological factors that have been influencing IT/IS outsourcing in NBE.

5.3.1.1 Political Factors

Though the Internet has reduced the distance between two points, politics still matters because politics is one of the globalization factors that one should understand. Understanding the nature of politics in the globalized world lessens the risks of conducting international business and better prepares outsourcing managers for political events that may hinder business process outsourcing opportunities (Yoder, Vera, & Suvarna, 2010).

The researcher asked our respondents political factors that are affecting National Bank Ethiopia's IT/IS outsourcing; they responded from different angels like political unrest, government interference, political instability, pressure from different government agencies, pressure from external bodies like World Bank, the FDRE's procurement policy and others.

Political unrest was pointed out by all three of our respondents as a major factor. In the process of outsourcing, companies need their vendors onsite. However, if there is a threat of political unrest in the outsourcing country, no country or vendor will be willing to send their citizens/employees onsite as they give priority to the security of their citizens. Due to this, projects were delayed.

Additionally, this political instability has also great impact on business continuity of outsourcing. One of our respondents put it this way, "…There are times when we need our vendors' onsite support. If they feel that Ethiopia is not safe, they won't send us their staff to give us that onsite support. Our services have been highly impacted by the past political unrest in Ethiopia".

Another respondent added on the effect of this political instability, "… we couldn't get onsite support for days because of political unrest in Addis". Our respondent even told us that the Bank could not get onsite support from the local vendors when there was rally in Addis Ababa.

Moreover, political unrest could bring economic challenges which in turn might lead to a contract termination as well. Here is what our respondent pointed out: "… It brings shortage of foreign currency, and this delays vendors payment. Delay of their payment gives our vendors a disappointment which could lead to the termination of our contract with them because they are very strict on their deadline. Especially, our international vendors need to get paid on time for the service they provided. If we don't pay them on time, they refuse to give us support even for urgent high priority issues on our live systems. This on the other hand makes our customers to be dissatisfied by our service and it has high impact on the country's economy". As failure to deliver a service by vendor was mentioned the first reason of contract termination from the client side, failure of the Bank to pay for the service it got from service provider was mentioned as the first reason of termination of the contracts from vendors' side.

If peace could not be restored shortly, political unrest could lead to the termination of a contract. Failure of the supplier to deliver any or all the services within the period specified in the contract, or within any extension thereof granted by the Bank was mentioned as the first reason for termination of the contracts. In literature also political instability was found to be a major concern of global outsourcing (Raisinghani, Starr, Hickerson, Morrison, & Howard, 2008). Political unrest is above the control of the Bank. However, NBE should consider using local service providers for those services that could be acquired locally.

Political pressure from international aid organizations is one of the factors found to be impacting NBE's IT/IS outsourcing. The political pressures from the World Bank, IMF, IFC, SWIFT and manufacturers or service deliverers are described as follows.

The World Bank is helping to fight poverty and improve living standards in Ethiopia. Its goals include promoting rapid economic growth and improving service delivery. To help the country in achieving this goal, it uses different methods like helping the government from different angles. One of the ways it is participating in improving the financial sector of Ethiopia is in enabling the National Bank of Ethiopia to have a standard national payment system. Due to this, World Bank enforced the Bank outsource system development of this national payment system. Our respondent

clarified how these organizations have driven both NBE's and other countries outsourcing saying, "IMF and World banks are the ocean of funds for third world countries. By providing that kind of supply they force countries to outsource from member countries contributing for the IMF and World Bank by setting criteria that countries could not able to escape".

As a result, in NBE the national payment system called Ethiopian Automated Transfer System (EATS) was outsourced to Montran by the initiation and funding of the World Bank. Another system called Ethiopian Credit Reference Bureau System (ECRBS) was also outsourced by the initiation and funding of the World Bank. These organizations' sometimes might go beyond just initiating and funding the project in the process of outsourcing. Our respondent emphasized, *"When they initiate and fund projects:*

1. *They recommend a company from which we must buy*
2. *Sometimes they may involve in the procurement activities like reviewing the process*
3. *Limit amount of their funds and force us to buy from a vendor that have presented within their fund limit".*

At the time of this research, there were other projects undergoing which were initiated by International Finance Corporation (IFC) which is a member of the World Bank Group whose mission is to promote sustainable private sector investment in developing countries, helping to reduce poverty and improve people's lives. Within the RFP of the project, the researcher has found that they have representatives in the project team. Their presence has advantages like assisting the Bank in acquiring a system with international best practices though their political influence still exists. This finding also agrees what has been said in the research of Morgan (2007) where he mentioned that international aid agencies like the International Monetary Fund, the World Bank Group, and governments themselves involve in outsourcing in many underdeveloped countries. However, this could not be the case in developed countries, because they don't need funds from these aid organizations.

Another international organization that pressured NBE to outsource is SWIFT (Society for Worldwide Interbank Financial Telecommunication). As a company, SWIFT is a global member-owned cooperative and the world's leading provider of secure financial messaging services. It is a system that facilitates sending and receipt of remittance messages between banks especially with foreign banks. Due to its dominance in international money transfer, many banks and other

institutions use the system. Therefore, SWIFT member international banks are forced to use the system which is directly provided by SWIFT. One of our respondents put it this way; "Using SWIFT system is a mandatory for us. Therefore, we are forced to outsource, accept whatever they say, pay whatever they request and use this SWIFT System".

Manufacturers and service providers also enforce outsourcing when they have new or updated version of their products by discontinuing support for their old versions. Organizations are forced to buy their new products in order to continue providing service to their customers. If we take hardware for example, their lifespan is limited. On the contrary, there are devices that have been used in NBE for more than ten years. Due to this, there were times when the Bank could not get neither support nor replacement for some hardware because the manufacturers have stopped producing and giving support for those devices. One of our respondents replied, "… when the services we are currently using become outdated, we don't get support from vendors or manufacturers, so we have to use their new product". This aligns with what was written in the research of Lehmann (2010) where it was pointed out that when information systems have become a strategic core competence, the main issue is one of keeping pace with both business developments and the growth in technology opportunities.

The Ethiopian government interference, pressure from other governmental agencies and government directives have found to be among the factors influencing NBE's IT/IS outsourcing. Their involvements vary from requesting the Bank to acquire a new system that should be hosted at NBE changing the normal procurement process of the Bank.

Apparently, Ethiopian government's initiative influences NBE's IT/IS outsourcing. One of our respondents gave as a good example of this. He stated that "Government also pushes us to outsource. For example, in this year government brought a new initiative called 'Doing Business'. The idea is to promote foreign investments and attract foreign investors to Ethiopia". According to FanaBC (2018), Ethiopia ranks at 159 from 190 in Ease of Doing Business and the investment environment as inefficient, bureaucratic and cumbersome at that time. In order to overcome these problems, he mobilized a National Initiative called Ease of Doing Business. This National Initiative identified over 80 distinct actions to be delivered across 10 government agencies of which the National Bank of Ethiopia was given the mandate of providing a system with credit information of micro-finance institutions in Ethiopia.

Another respondent added, “Investors need to know how much access is there to get loan from banks, micro-finances and others, because they believe that if people could not buy their products from their pocket, they could buy it with loan. There are times when investors themselves need to get loan for some cases. Therefore, they need to make sure that at least 5% of adult population of the country has access to credit”. It was clearly identified in one of the RFP documents the researcher reviewed that lack of access to credit is a key challenge to enterprise development in Ethiopia. Our respondent continued, “Due this, we were requested by Ethiopian Investment Commission and forced by the government to provide a system to that supports all micro-finance institutions credit information within a short period of time”.

The first respondent continued, “… though there was CIC system to provide credit information of banks’ costumers, there is no central system to provide credit information of micro-finance institutions in Ethiopia”. Hence, upon the agreement between the World Bank Group and Ethiopia on Small and Medium Enterprises Finance Project (SMEFP), IFC has agreed to provide technical assistance to the National Bank of Ethiopia (NBE) in its efforts at improving access to finance for micro, small and medium enterprises (‘MSMEs’) through the development and establishment of a Movable Property Security Right Registry System (MPSRRS). “So, due to the urgent need of the system, we were forced to directly award its contract to a vendor of ECRBS, with which we had many issues before”.

From their responses one can see that in the process of acquiring this system Government intervention, EIC and IFC were the parties involved in pressuring NBE to outsource. IFC required Ethiopia to have it, EIC requested NBE to provide the system and the government interferes by forcing NBE to outsource and award the bid directly – out of the normal process of bidding of the Bank. This finding agrees with what Carpenter & Agrawal (2010) mentioned as government intervention is one of the national elements that encourage/discourage outsourcing. In NBE’s case, government intervention was an encouraging factor. Other authors, Koveos & Tang (2004) identified that the freer the country from government interference, the greater ability to engage in outsourcing activities.

Government directives are also among mentioned factors affecting outsourcing of NBE by limiting where to outsource. According to Ethiopian Procurement Policy, organizations in Ethiopia are not allowed to outsource to countries that are under trade ban. One of our respondents said, “We as a

bank, work under government's rules and regulations. Our procurement policy is guided by the Country's procurement policy. In the Ethiopian Procurement Policy, there are countries to which we cannot outsource. Therefore, we are limited to outsource to only allowed countries".

From Document Review

Taking this respondent's comment, the researcher found in the Federal Public Procurement Directive (2010) reasons for bidder disqualifications include but not limited to:

a. *Where a bidder offers to supply the required objects of procurement originating in a country in respect of which the government of the Federal Democratic Republic of Ethiopia has imposed trade ban;*
b. *Where the bidder offers to supply the required objects of procurement originating in a country under trade embargo of the Security Counsel of the United Nations in which transacting with any business organization or individual who is the national of that country is prohibited;*

Even if products of those countries might have the best quality in the world, due to this restriction, the Bank is compelled to only buy from other countries which are not under trade ban, with whatever quality they have. This finding aligns with what was presented in the research of Raisinghani, Starr, Hickerson, Morrison, & Howard (2008) where trading restrictions imposed by the sovereign was observed to be influencing outsourcing.

There is also a government regulation that strictly forces governmental organizations to select those least-cost bidders rather than considering quality while outsourcing. Though it seems cost saving, this could lead to other extra costs. For example, there was a company that provided a system with low cost by winning the bid. However, it was revealed that the cost of their service maintenance/support was higher than that of their product's cost.

Directions given by governmental agencies are also about to limit to whom the Bank should outsource. According to one of our respondents, a government agency called the Information and Network Security Agency has given a direction to request source code along with those systems the Bank outsources. However, many companies are not willing to provide systems with their source codes, so this might limit the Bank's outsourcing to only companies that are willing to provide their systems with their source codes.

Due to the mandate given to National Bank of Ethiopia, other governmental agencies are driving NBE to outsource. For example, Ethiopian Revenue and Customs Authority is requesting the Bank to acquire a system that have many new features than the current FEMOS. Our respondent put it this way, "… Ethiopian Revenue and Customs Authority,… is pushing us to upgrade and add lots of new features to the existing FEMOS or buy new system that fulfill their requirements". Additionally, according to one of our respondents, MoFEC is also another government agency that is pushing the Bank to outsource electronic payment because the Bank hosts the national payment system and every national transaction should pass through this system.

Loss of intellectual property is one of the risks of ITO (Romaniello & Medlin, 2010) and hence, some firms worry about weak intellectual property protections and do not want to risk losing a strategic formula or manufacturing advantage because of outsourcing. Being one of national elements that could encourage or discourage outsourcing, lack of a well formulated legal system causes outsourcers to look elsewhere, especially if their intellectual property is not protected (Carpenter & Agrawal, 2010). Though literatures mention that intellectual property rights protection is poor in developing countries, it looks different in case of NBE. For instance, in Ethiopia's National ICT Policy and Strategy contains objectives like ensuring the protection of intellectual property right in ICT (MCIT, 2016).

In NBE, this intellectual property right is managed and protected through SLAs in which the Bank's delegate(s) signs an agreement to protect it. Therefore, "… they have no worries regarding the protection of their intellectual property right" our respondent responded. It was mentioned in one of the RFPs the research has reviewed that, any and all the ownership, copyright, trademarks, trade names, patents and other intellectual property rights subsisting in or used in connection with the services, including all associated documentation, are and shall remain the sole property of the Service Provider or, where relevant, the Supplier's licensor.

This finding aligns with what Muluneh (2009) found in his research on Ethiopian Telecommunication Corporation (ETC) of the time, now called ethio telecom. He indicated that, ETC failed the two options suggested by Lee (Lee O. , 1996) regarding the intellectual property rights. The two options were either the outsourcing customer should insist intellectual property produced by the vendor in servicing the customer should belong to the customer or it should be given provisions to access the source code for future modifications.

In general, Political unrest, Political Pressure from international aid organizations, Pressure from SWIFT, Pressure from manufacturers and service providers, Government's initiative, Government's Directives, Directions given by Governmental Agency like INSA, Request from other governmental organizations and Intellectual Property Right Protection are found to be political factors affecting NBEs IT/IS outsourcing. These factors and their effects on NBE's IT/IS outsourcing are summarized in the Table 0-2.

5.3.1.2 Economic Factors

There were macro-economic factors such as currency exchange rates, scarcity of foreign currency and price fluctuation in the Country affecting NBE's IT/IS outsourcing.

Most of NBE's outsourced projects are outsourced to international companies. When currency exchange rate increased, running a project within the estimated budget became difficult. This might lead the Bank to extend the project time until required amount of budget is found. One of our respondents put the effect of currency exchange rate as, "When birr was devalued as such and we don't have enough budget for that time, we preferred to sustain our existing systems rather than running additional new projects". On the other hand, in developed countries there could not be such worries of change in currency exchange rates.

From the Department's operational expense budget utilization document, the researcher found that budgets are allocated in Ethiopian birr while the payments are in foreign currencies (mostly US dollar) for international vendors. When birr gets devalued, the annual maintenance cost of services, as well as hardware, software and license costs will increase by the same amount the birr devalued – 15% in Ethiopia last time. This brings budget shortage to the Department and may lead to delay of payment for vendors if the shortage is more than the Department's contingency budget.

In its worst case, it might lead to termination of a contract. This is because it was mentioned in one of the contracts the researcher has reviewed that the supplier may terminate a contract if the Bank failed to pay any money within forty-five days after receiving written notice from the Supplier that such payment is overdue.

In addition to the currency exchange rates, price fluctuation also affects companies outsourcing. It might also lead to termination of new outsourcing projects because the company may lack enough

budget to run new project as our respondent responded. However, an organization may make an adjustment depending on the criticality of the outsourcing. Here is one of our respondents' words; "… Since most of systems hosted at the bank are critical systems and used by all financial sectors, we have to continue with our outsourcing regardless of price fluctuation by using different adjustments". The adjustment may include suspension of new projects in order to sustain the existing systems.

At the time of this research, there was a high scarcity of foreign currency in Ethiopia which was affecting NBE's IT outsourcing and outsourced services. One of our respondents said, "There are services that we want to buy directly from the manufacturers like licenses, hardware and software. But due to the lack of foreign currency, we are forced to buy them from local vendors with a very expensive price which could be double of the company's original price". Its effect on service continuity was added by another respondent, "Lack of enough foreign currency makes us unable to pay for our vendors on time; if we could not pay on time for them, we won't get on time support from them".

Due to the high scarcity to foreign currency in the Country, foreigners are forced to pay for different services in foreign currency. One of our respondents took us further in telling the effect of lack of foreign currency saying that, "One of our vendor's staff who came for an urgent datacenter UPS support did not know this policy. He changed his foreign currency to local currency and tried to pay for his hotel service in Ethiopian birr. The hotel refused to accept local currency from him and he lost a lot of money. He was very disappointed. We tried to help, but could do nothing as it was government's decision". The disappointment of a service provider might lead to having a bad relationship with the Bank.

Highly skilled IT labor shortage, volatility in the IT job market and labor cost are major economic factors in the external environment that significantly impact IT outsourcing. There is a high demand and low supply of skilled IT human resources, especially in developing countries like Ethiopia. If there is enough skilled IT human resource in a company, it might save the company from outsourcing systems developments that are not that much complex and simple maintenances/supports.

All three of our respondents believe that there are systems those could be developed in house among those outsourced by NBE. One of our respondents explained the cost that could have saved

if those systems were developed in house by saying; "… if we have developed those systems in house, we could have saved that much money we spent on buying the systems and the yearly SLA costs". However, "there is no practice in NBE to check whether ISMD staff could develop the system to be outsourced, we just outsource when there a need for it", one of our respondents replied.

There were reasons reasoned out by our respondents for using external products. "Not only as NBE, as a country we mostly prefer to use products including IT systems from abroad even though the systems could be developed in house or within the country. There is more feeling of trust and being secured in foreign products than what is produced in the Country". In literature also it was mentioned that, many firms and government agencies have learned that selecting a provider with internationally recognized credentials can prove to be one safe harbor for assuring that the outsourcing work will be done according to customer requirements (Morgan J. N., 2007). However, "… there are skilled IT staffs in Ethiopia that do develop for foreign companies", she contradicted the wrong perception she mentioned before.

In addition to system development, the Bank could have saved lots of money by developing its internal capacity. "… if we had internal capacity building properly in place, we could have saved most of costs we are spending on services we are getting from local supports", one of our respondents added. It was mentioned in literature that, the greater the level of education and training of a country's workforce, the lower the costs of adjustment (Carpenter & Agrawal, 2010). It is surprising to witness that there is lack of trained IT workers in the US also (Aman, 2010).

From Document Review

In the Ethiopia's National ICT Policy and Strategy (MCIT, 2016), there is a great emphasis placed on the strategic role of human capital development with the following objectives:

- *Produce a knowledgeable and highly skilled ICT labor force for enabling the country to develop and use ICT more effectively; and*
- *Create a digitally literate population capable of using ICT to transform their standards of living and of not only consuming but also producing digital content.*

It is the researcher belief that by achieving these objectives, the Country could save lots of money that are being spent on technologies that are not that much complex as well as the complex one.

On the other hand, there are local technology providers that are afraid to provide their services, especially system development, to governmental organizations like NBE. One of our respondents pointed out their reasons; "… some vendors within the country, even with skilled IT human resources providing lots of IT services for other NGOs, fear to provide IT services like system developments for government companies due to their bureaucracies, fear of getting imprisoned and losing their businesses for simple failures in their systems. We have faced similar challenge in the past".

Market volatility in the IT job market was another factor influencing NBE's IT/IS outsourcing due to the high demand and low supply of highly skilled IT human resources. Its effect is from both internal and external to NBE. "From Vendors side when an experienced staff that have been giving us support leaves the company, sometimes we face difficulties with the new staff to get support. This happens mostly because the new staff does not know details of history our issues from the beginning and it takes us time to explain every issue to them due to poor documentation of issues from both of us".

The Bank has been facing the same challenge when its experienced internal staffs resigns as they leave with their experiences without enough knowledge sharing with the rest of the staff. This is similar with what has been found out by researchers like Robert, Vera & Suvarna (2010) where they revealed that high turnover rates in India and elsewhere among programmers and call center technicians lead to project delays, quality concerns, and uncontrolled dissemination of proprietary information.

In general, Increase in currency exchange rate, Price fluctuation, Scarcity of foreign currency, Shortage of highly skilled IT human resource, Lack of trust on local products and service providers, Unwillingness of local vendors in providing service to governmental organizations and Volatility of IT job market have been found to be economic factors affecting the Bank's IT/IS outsourcing. These factors and their effects are depicted in the Table 0-3.

5.3.1.3 Socio-cultural Factors

Cultural issues have significant impact on the success or failure of outsourcing especially when two or more people from different cultures work together on the same project. Our respondents have pointed out socio-cultural factors affecting NBEs IT/IS outsourcing such as cross-cultural communications, difference in work habit and time management, organizational culture and countries public holidays.

NBE has outsourced its IT to vendors of different countries located in different contents as shown in Table 0-1. The communication with international vendors is always in English. However, for most of NBE's vendors, English is neither their nor our native language. This have impacted the Bank's IT outsourcing by making them unable to understand each other on phone with vendors. It was pointed out by our respondent as, "Sometimes we talk on phone for long time without understanding each other and without reaching on an agreement due to their ascents. We then communicate through chats or email to come to common ground". It is difficult to communicate all your ideas through email, telegram or skype chats. Because it takes time to type your ideas and you can't share your emotions using a typed text only. Language was mentioned as a factor affecting outsourcing as it varies from country to country and that may contribute to risk (Raisinghani, Starr, Hickerson, Morrison, & Howard, 2008).

Countries have different public holidays on which their offices are closed. Here is what our respondent said; "We face difficulties in getting support with our Indian vendors as they have lots of holidays". On those holidays, it is difficult for the Bank to get on-time support. This aligns with what was found in the research of Robert, Vera & Suvarna (2010) where they mentioned that scheduling work become complicated because of different (and more frequent) holidays in Europe and by weekends that start on Thursdays in Israel. In another research, it was pointed out that country specific cultures can add risk in global outsourcing.

Organizational culture also has impact on outsourcing. "…our Indian vendors, have a first aid and emergency trainings every three or six months for three to four days". On such trainings, there is no one to give us system support; they don't use any Internet or cellphone communications at that time. They are totally closed". Organizational culture varies from organization to organization. One of our respondents told us, "Some of them are very committed and provide quality service to us while others are full of bureaucracies".

There is also time management problem between NBE and its vendors. Three of our respondents agree that all vendors have different time management styles. However, mostly NBE's time management is poorer than theirs according to our respondents. One of the respondents responded on the Bank's poor time management by saying, "Most of our vendors are very strict on time management; ours is too far from theirs. They need an allocated time to work on issues and try to finish within that allocated time. On the contrary, our internal process is too slow to catch up with them. They do business with us by tolerating lots of our internal bureaucracies because it is just a business".

Other factor affecting NBE's IT/IS outsourcing was found to be the geographical distance of vendors. Having a 24/7 support agreement only does not guarantee a total business continuity, because getting onsite support for outsourced systems are mostly affected by geographical distances. Our respondent put it this way, "There was a time when we needed a hardware directly from IBM when one of our controllers failed. We ordered the device and waited for fifteen days until the device was shipped, delivered, configured and start to work. We were forced to shut down one of our mission critical system for that long time. Since we totally moved the manual process of money distribution to this system, during that period there was no distribution of money to any issue branches in Ethiopia. If we had provider nearer to us the issue could have been solved within short period".

In general, Cross-language communications, Public holidays, Organizational culture difference, Work habit and time management and Geographical location differences are among the social factors found to be affecting NBEs IT/IS outsourcing. These factors and their effects are summarized the Table 0-4.

5.3.1.4 Technological Factors

"Technology provides you solutions the easy way. It makes you to go for it" one of our respondents responded. Unable to cope up with the rapidly changing nature of technology using only internal capacity, on the other hand, is the main reason for outsourcing. One of our respondents pointed out this saying, "Technology is changing rapidly and it is difficult to run with its speed by only using internal capacity. We are forced to outsource to be where we are supposed to be". Additionally, technology is uncertain. There were products and services discontinuity for which the Bank could not get a support.

Complex technologies that some systems use leads the companies to outsource as it is difficult to acquire by using internal capacity. One of our respondents revealed this, “There are systems that are very complex in nature that we have outsourced their development and support to vendors”. Even if NBE tries to develop such system inhouse, “… its delivery might be in long period of time with quality far behind what we get from market”. The other respondent also added, “… or may not be possible to use only internal IT professionals to develop some systems due to the required complex technology”. NBE is using number of hardware, software and applications which require number of skills; this has increased the technological complexity at the Bank.

In the era of globalization, many new technologies are emerging. NBE could not be an exception is using those emerging technologies. Therefore, NBE’s IT/IS outsourcing has been affected by those emerging technologies. “We are forced to use products of emerging technologies to be at the same phase with the world. For example, there was no concept of UV image scanning while processing cheques. In order to identify fake cheques from the genuine one, UV image scanning of cheques has emerged with the cheque standardization. Currently, using this technology is not an option for us”. Another respondent also added, “We have to … use them in order provide the services our customers need”.

Obsolescence of technology also forces to outsource; our respondent said, “When the products we are using become outdated, we don’t get support from vendors or manufacturers, so we have to use their new product”. In literatures similar factors have been mentioned by Grover, Cheon and Teng (1996) which they said avoiding the risk of technological obsolescence which results from dynamic changes in IT.

In general, Technological Uncertainty, Technological complexity, Emerging technologies and Obsolescence of technologies are technological factors found to be affecting NBE’s IT/IS outsourcing. these factors and their effects on the Bank’s outsourcing are summarized in Table 0-5. Although the future can never be predicted perfectly, it is clearly important that managers try to analyze their environments as carefully as they can in order to anticipate and – if possible – take advantage of such environmental changes (Johnson, et al., 2017).

5.3.2 Industry Factors

Industry factors the study present here are factors that are not directly from NBE, but from banking industry in Ethiopia as a whole. “In the banking sectors, many new technologies like mobile

baking, e-payments and the like are emerging as a standard". Because those technologies are new and are for the banking sector, banks need to have them. Since it is difficult for banks to develop internally, outsourcing them is not an option to save time and cost in addition to provide quality service.

Standardization is one the factors that lead banking industry in Ethiopia to go for outsourcing. NBE was recommended and pushed by the World Bank to have a standard national payment system. Due to this, the Bank purchased a system called Ethiopian Automated Transfer System (EATS) which facilitates in-country payment clearing process between all banks in Ethiopia. NBE gave a direction for banks to use EATS module called Payment Originator (PO) to generate their transactions with SWIFT standard message format, and send to NBE through EATS gateway until they implement their own CORE Banking system within specified time limit.

Due to the technological complexity in the CORE banking, no bank in Ethiopia was able to develop its own CORE banking system. On the other hand, at that time, there were plenty of CORE banking solution provider in the market. Due to these to reason, to acquire their CORE banking system, every bank outsourced their CORE banking systems.

Availability of matured business system that are a head current business need leads companies to outsource. Two of our respondents responded from different angles; "There are companies that are one step ahead of the business. Such companies hire business analysts to know what business need from the technology. Using those analysts, those companies will have and provide what the business is about to ask. When what you need is already there in the market, you go for it and outsource".

Another respondent emphasized, "When there is a need for specific system which its market is already matured, we go for outsourcing. For example, it is hard for us to internally develop systems like the national payment system and core banking system we are currently using. This is because those systems are very complex in nature and they were developed over years with many improvements. They were already matured enough and available in the market at the time we needed them".

Though it is not NBE's culture, according to our respondent, availability of multiple supplier is one the reasons driving outsourcing. He explained the Bank's culture of outsourcing with respect to outsourcing; "Our current culture is to outsource when it is mandatory to do so. We neither go

to market only because some services are available in the market, nor we also do not inhouse our service need because of lack of multiple suppliers. We go to market whenever there is a need from internal business departments or there is an external pressure". Even the Bank has outsourced its SWIFT to a sole provider because it is required by the business.

The other two respondent also agree with his view and they added that the availability of multiple supplier gives them chance to select a vendor with the low price for the service. Because, "... as a bank we are following the least-cost strategy", said our respondent. This aligns with what Currie and Willocks (1998) revealed as the three advantages multiple-supplier for outsourcing service such as protection of customer firm from being dependent on a single supplier, getting chance to use short-term contracts that may not be renewed with the same supplier and enabling customer to focus on its core business while suppliers manage and provide IT services.

On the contrary to the availability of multiple suppliers, there is a single vendor dependency for multiple IT/IS services witnessed by the researcher and confirmed by all three of our respondents. From their responses it was possible to conclude that there were four ways the Bank has become single vendor dependent. One is because the vendor was a sole provider of the service (example, SWIFT); the other is awarding the contract directly to the vendor by pressure from government agency interference (example, INSA projects), other vendors terminate their contracts due to the bureaucracy in the Bank while others continue with the Bank in order to get indirect benefits (example, different supports from local vendors) and lastly, by winning the Banks bids.

Elaborating reasons for single vendor dependency for many IT/IS services one of our respondents said, "The first reason is that they are selected by wining our bids. They are also very capable compared to other local IT companies. They know our bidding culture which makes it easy for them to win while others failed to reply properly". The other strategy used by this vendor on which the Bank is depending for multiple IT/IS services, is providing a free service for some supports that they did not sign an agreement with the Bank. By doing this, they were able to understand what the Bank needs which in turn has paved the way for them to win the bids.

As an advantage, one of our respondents replied, "If we had multiple local vendors, managing them all might be more complex compared managing a single vendor". This response agrees with what Lacity & Willcocks (1998) have mentioned saying a single vendor has reduced additional time and resources that are required to manage multiple vendors.

On the other hand, all three of our respondents agreed that there were risks and challenges in depending on a single vendor for multiple services. This company mentioned as a single vendor for multiple IT/IS services, have only few employees and giving support most of banks, and other major organizations in the Country. Due to this our respondent pointed out; "… we could not get on time support sometimes even for urgent cases". It was stressed by one of our respondents that the great challenge would be, total lack of support in case this single vendor collapses.

In general, standardization, Technological complexity behind the systems required by industry, market maturity and availability of multiple suppliers are found to be the factors affecting NBE's IT/IS outsourcing from the banking industry. These factors and their effects are summarized in Table 0-6.

5.3.3 Internal Factors

Starting with the vision of the bank, "to be strongest and most reputable central bank in Africa", the researcher has asked respondents if this vision could be one the reasons for IT/IS outsourcing in NBE, and whether ISMD is outsourcing considering its role in this vision; one of them replied, "… we are not doing with this sprit, rather we are in a firefighting approach".

Though there are complex outsourced systems, all three of our respondents agree that there are systems that could be developed inhouse among those outsourced systems. However, they have been outsourced due to different reasons, like standardization, lack of enough internal capacity building, the absence of internal system development team, lack of awareness and other related issues. The following passages, tell us more about internal factors of IT outsourcing witnessed in NBE.

Standardization is one of the reasons NBE has been outsourcing. The Bank have been using a system called Bank Master for more than fifteen years. Through time new features that the system could not provide start emerging as a standard for banks to use. Then, "… the system became outdated missing most of features we needed at that time and new CORE banking systems start emerging as a new standard for banking industry. As a result, we replaced the old Bank Master system with a new CORE system called Quantum Banking System (QBS)".

One of our respondents pointed out another internal factor that was leading the bank to IT/IS outsourcing. Lack of internal capacity building strategy: "We don't have internal capacity building strategy; that is why we are depending on both local and international vendors. If we had internal capacity building strategy, we could have developed some of our outsourced systems internally".

Our respondent believes that by building internal capacity, the Bank could have saved a lot of money that has been spending on local support; "Some supports that we are getting from our local vendors could be done internally if we use our internal IT professionals and build their capacities". Due to this lack of enough internal capacity building, the Bank became SLA dependent.

Lack of internal capacity in NBE has many reasons like giving trainings for staff that does not work on the area of training, lack of workshop where the trained staff could exercise, lack of follow up on outcomes of trainings after the training, interference of Human Resource Management Department (HRMD) in reducing number of requested trainings and participants were also pointed out.

Lack of systems' enterprise architecture was also another factor affecting NBE's IT/IS outsourcing. Every system in NBE is standalone system and most them uses individual rack with their own infrastructures. This has exposed the Bank for extra costs of buying full rack infrastructure for every outsourced system while they could be integrated in to a single enterprise architecture. One of our respondents told us saying, "Last year we outsourced the bank supervision application and it went live. Then from the Micro-finance Supervision Directorate, we were requested to provide them a micro-finance institutions supervision system. Though both systems could be integrated into one enterprise architecture, we are currently going to use individual architectures for both systems because of we lack enterprise architecture. This leads us to do things with double efforts".

In addition to running on individual hardware infrastructure, systems at NBE use individual application and webservers like Jboss, Tomcat, Glassfish, WebSphere and Apache since every system is implemented and managed individually. This is also exposing the Bank to extra costs for trainings and licenses as the Bank is providing training for each system and licenses are purchased individually for systems. If the Bank had an enterprise architecture, it could have able to decide number of licenses it could have, type of web and application servers the system use. However, one of our respondents told us; "… we just accept what a vendor provides. Due to this we are

buying the same license twice or more for different systems that use the same application server like WebSphere".

Due to this lack of enterprise architecture, the bank is also wasting both human and hardware resources because every system has group people working on it individually. One of our respondents mentioned, "… as number of application servers increases, we need to have different internal experts on those application servers. We also pay for that much number of licenses and SLAs. We could have thought strategically".

The need from business department of NBE is another source of IT/IS outsourcing. Almost all internally initiated outsourcings in NBE are requested by internal business departments. One of our respondents emphasized this by saying, "Business department initiates outsourcing and ISMD takes the project leadership and deliver the service. Currently, we don't check whether the requested system can be developed internally or not. We just prepare the RFP with the business department and go for outsourcing".

Lack of awareness on the requested system have also led NBE to outsourcing. This happened when ISMD staff had no previous awareness about the requested system and thought it was too complex. One of our respondents told us, "I believe that CIC could be done internally. However, at that time, we didn't know what the system was supposed to do and we have no awareness of such system before. We thought it was very complex and we just outsourced it with the initiation and funding of the World Bank". This aligns with what Schulte (2004) pointed out as lack of proper exposure and experience that leads an organization to look for a vendor.

Time and cost saving have been mentioned by most literatures as the major factors for outsourcing. In NBE, though time saving is considered as one of IT outsourcing factors, the banks has never outsourced to save costs according to our respondents. Our respondent told us, "We don't outsource to save cost directly". The only possible cost saving occurs at buying a service or product by following the Bank's least-cost strategy which was the government's regulation for governmental organizations. However, this strategy could lead to unplanned extra cost as we have discussed under the political factors in the previous section.

Lack of outsourcing strategy is another factor which put ISMD into a continuous outsourcing and firefighting; "Since we don't have strategy for outsourcing it is hard for us to predict what is going to happen in near future. We go for outsourcing only when we could not tolerate the problem any

more. We are firefighting than doing it strategically". Firefighting does not give time to think strategically. This lack of strategic outsourcing has led the ISMD to lack enough internal capacity building which in turn has forced the Bank to be SLA dependent.

Additionally, due to lack of outsourcing strategy, the Bank is not getting full advantages of outsourcing. For example, cost saving has been amongst the top outsourcing advantages. However, the bank in not getting this advantage as it is spending lots of money on outsourcing systems that could be developed internally. The Bank could have benefited more if it had used internal staff to develop some of the outsourced systems and used few percent of the costs spent on outsourcing on internal staff as an encouragement for what they did. The Bank could be benefited by doing this in many ways like retaining its internal staff with simple encouragement, save lots of many by saving different costs involved with vendors and be able to build internal capacity.

At the time of this study, the bank has no system development team. However, there are ISMD staffs that are capable of developing systems which shows us the existence of internal capacity. For instance, the banks user support system called NBE Online Tracking System, e-library, Ethiopian Foreign Currency Allocation Registration System (EFCARS) and salary and benefit information systems are developed by two ISMD staffs.

Not having a system development team has made the Bank to go for outsourcing always even for simple systems that could be developed by internal staff within short period of time and with possible no purchasing cost unlike the high cost of vendors. There are other costs like annual maintenance cost, change request cost, travel cost, communication costs and other hidden costs that could be saved by developing systems internally.

When systems are developed internally, it is easy to customize to the users' requirements whenever requested. On the other hand, it is not that much easy to change what the vendor have provided. It might need additional time and cost. The researcher has witnessed these both scenarios in NBE. For those internally developed systems, it took less time to fix issues and add additional features. On the other hand, for outsourced systems, adding additional features are managed by change request for which the Bank must go through formal process of change management according to SLAs and cost is involved always.

According to Iyasu (2017), BPR study in year 2009 was one of the reasons for the bank to outsource its system development. Due to this the System Development team was reassigned to

other teams such as Network and Infrastructure, Database management, and Application Management teams. However, with the recent NBE's 5 Year IT strategic roadmap & implementation plan studied by KPMG in year 2017, the bank is about to have System Development team. This tells us ISMD is structuring and restructuring its team based on recommendations and directions given by other bodies than following its own strategic directions.

Internal bureaucracy has a great impact on IT/IS outsourcing by either forcing an organization to outsource or not to outsource. It has made ISMD incapable of terminating a decade-long-running almost-failed projects which were planned to be delivered within months. Due to internal bureaucracy, the system that could totally replace many of those projects was proposed by ISMD but was not accepted. "… we could not terminate 'almost failed projects' and outsource them to other international vendors. Those projects were planned to be completed and delivered within a period of less than one year. We could not terminate those projects because of internal bureaucracy and they are outsourced to another government agency". ISMD, proposed to replace those projects by ERP system. However, by top management's refusal, the proposal was not accepted. It was mentioned in literature, on the contrary, that the support from top management is one the success factors of Information System outsourcing (Lacity & Hirschheim, 1993). From the very beginning, if the Bank had strategic outsourcing, the researcher believes that these projects could not have been outsourced, rather developed in house.

In general, standardization, lack of internal system development team, lack of internal capacity building, lack of systems enterprise architecture, Request from business department, Lack of awareness, Time saving, Cost saving, Lack of outsourcing strategy, Internal bureaucracy and Involvement of the top management are internal factors affecting NBE's IT/IS outsourcing that the study has found in this research. These factors and their effects on NBE's IT/IS outsourcing are depicted in the Table 0-7.

Chapter 6

Summary of Findings, Conclusion, Recommendations and Contribution of the Study

This study shows factors influencing IT/IS outsourcing in NBE using factors from different perspectives. In this chapter, we present summary of the findings and conclusion. The research's recommendations for the Bank as well as for future research are also presented along with the contribution of the study.

6.1 Summary of Findings

The Bank's IT/IS outsourcing have been influenced by different factors. The study has presented those factors from different angles. To study the external environment factors influencing the Bank's IT/IS outsourcing, the study used macro-environment factors such as Political, Economic, Social and Technological factors.

Political unrest in Ethiopia has influenced the Bank's IT/IS outsourcing by hindering the onsite availability of vendors during outsourcing project, delaying project delivery time, no onsite support from vendors by which business continuity has been hindered; causing economic crisis which brought scarcity of foreign currency. Due to this, the Bank have been forced to buy products from local vendors with expensive costs.

Political pressure from international aid organizations such as IMF and the World Bank Group has encouraged NBE's IT/IS outsourcing and helped the Bank in having standard systems though it has lessened the ISMD's decision power regarding those systems, especially ECRBS. Other political pressure was from manufacturers and service provider by stopping production and support for their older versions.

Government's initiative has also been witnessed in influencing the Bank's IT/IS outsourcing. Though it has encouraged the Bank's IT/IS outsourcing, it didn't follow the normal procurement process, it has also limited the where, when and to whom to outsource by directly awarding a bid to a vendor with which NBE, especially, ISMD had many unsolved issues before.

Different governmental agencies have been and about to influence the Bank's IT/IS outsourcing by putting different directives as such requesting source codes of outsourced systems, outsource only allowed countries and requesting the Bank to acquire new systems or upgrade the existing systems to meet their requirements depending on the mandate given to the Bank.

Though intellectual property rights of outsourced systems are protected by SLA, as per our review, we have found that those SLAs give total ownership to vendors which have made the Bank not able to make any change to those systems even changing simple configurations.

We have also seen that there were economic factors such as increase of currency exchange rate which have led to price fluctuations, scarcity of foreign currency, volatility of IT job market which has caused scarcity of highly skilled IT human resource, lack of trust on local products and unwillingness of local service providers to provide their services to NBE, influencing the Bank's IT/IS outsourcing. We have seen a bidirectional mistrust between NBE and local service providers. From NBE, there is a feeling of being secured by outsourcing to international vendors than local vendors, from local service providers, there is a fear of working with governmental organizations.

Cross-language communications, public holidays, difference in organizational culture and work habit has been found to be the social factors influencing the Bank's IT/IS outsourcing. Geographical location difference has also been influencing the Bank's outsourcing by delaying onsite support the Bank required.

Technological factors were among the macro-environment factors have seen in this study. Technological uncertainty, technological complexity, emerging technologies and technological obsolescence have been found to be technological factors influencing the Bank's IT/IS outsourcing.

Industry is a group of firms producing products or services that are essentially the same. In this study, we have also dealt with factors influencing NBE's IT/IS outsourcing from the Banking industry in Ethiopia. Standardization, technological complexity required by the systems used by the banking industry, market maturity for services that the banking industry require and availability of multiple suppliers for the services the industry require are found to be factors influencing NBE's IT/IS outsourcing from the banking industry. Despite of availability of multiple suppliers, we have also witnessed a single vendor dependency in NBE due to different reasons.

Standardization, Lack of internal system development team, Lack of internal Capacity building, Lack of systems' enterprise architecture, Request from business department, Lack of awareness Time saving, Cost saving, Lack of outsourcing strategy, Internal bureaucracy, Organizational culture of NBE and Involvement of the top management have been found to be internal factors.

6.2 Conclusion

Every organization rely on IT services now days. Because of different reasons discussed under section 2.3 of this study and other reasons, they outsource their IT/IS services. However, most of IT/IS outsourcings are not successful compared to other kinds of outsourcings. Problems related to its proper decision making is one of the failure reasons. However, decision making of IT/IS outsourcing are influenced by different factors. This research was aimed at exploring those factors influencing IT/IS outsourcing decision and their effects on an organization's outsourcing. National Bank of Ethiopia was selected for the case study because (1) the Bank is highly relied on IT/IS outsourced services for many years, (2) the Bank is a regulatory body and works with different international and governmental organizations than any other bank in the Country hence, its outsourcing is more influenced than others, (3) the researcher works at the Bank which helped him to get deep insight on the subject.

In order to clarify concepts, guide the study and provide a context for interpreting the study findings the study developed a research model that covers wide range of factors by reviewing related literatures. Interview and document review were used for data collection. Three IT managers of the Bank involved in the interview process. Data collected were analyzed using a qualitative data analysis.

The result of the analysis show that there are macro-environmental factors such as political and legal (e.g., political unrest, pressure from international aid organization, government initiative,…), economic (e.g., Increase in currency exchange rate, price fluctuation, scarcity of foreign currency,…), social (Cross-language communications, public holidays,…), technological (e.g., Obsolescence of technology, emerging technology, complexity,…), industry (e.g., Standardization, Market Maturity,…) and internal (e.g., Lack of internal system development team, internal Capacity building, Lack of awareness, Internal bureaucracy, Involvement of the top management,…) factors influencing the Bank's IT/IS outsourcing. Though the study is not focused on the statistical significance of these factors, factors such as government initiatives, government

directives, scarcity of foreign currency, difference in work habits, emerging technologies, standardization, technological complexity required by the banking sector business, lack of internal capacity building and lack of outsourcing strategy can be mentioned as key factors highly affecting the Bank's IT/IS outsourcings as they are affecting the outsourcing in various ways.

These factors could help CIOs or IT managers in developing their IT/IS outsourcing strategy and in order to have more managed IT outsourced services, decreased decision time and cost, and increased decision quality.

6.3 Recommendations

With respect to the political pressure from international aid organizations in lessening the decision power of ISMD on those systems that were funded by them, there should be some boundary which limits their involvement in the Bank's important decisions like continuing/terminating the contract when the vendor failed to deliver the required services. The Bank should not wait to renew its IT infrastructure until they are failed or they finish their life time in order to be safe from the pressure from manufacturers and service providers. It should be proactive in dealing with the rapidly changing technology. Having a long-term contract might also help to get support from vendors.

Outsourced IT/IS systems in NBE, according to their SLAs, are still mentioned to be properties of the providers even after being purchased by the Bank. This have disabled the Bank to modify the system. NBE should revise its contract and SLA terms with respect to this intellectual property right protection. Additionally, currently there is no one in managing contracts and SLAs centrally. Therefore, the Bank should have strong SLAs and contracts management and there should be responsible body for managing them.

Internal capacity building could be great remedy for most the Bank's IT/IS outsourcing challenges. For example, it could save the Bank from challenges caused by economic factors such as currency devalue and scarcity of foreign currency. If the Bank uses its internal capacity to develop systems, do system maintenances and infrastructure maintenances the impact of those factors will be highly minimized if not prevented. The scarcity of highly skilled IT human resource and the problem of volatility of IT job market could be overcome by building own internal capacity.

The Bank has outsourced most of database and infrastructure support to a single vendor which is risky. Though the vendor was select through RFP for all projects, the Bank should have seen these outsourcing decisions strategically to consider impacts of having a single vendor for all these supports.

For the difficulties with the cross-language communication, the bank should take language fluency of vendors in to consideration when outsourcing. SLA should be detail enough to include issues like public holidays, uncommon organizational cultures such as the emergency and first aid training with Indian vendors. Selecting a vendor nearer to Ethiopia is better for the Bank as the geographical location difference matters for onsite support especially for very urgent issues.

The Bank should have an IT Research and Development center. This could help the Bank to do different researches regarding technological advancements, innovations as well as IT outsourcing. It could also help the Bank in building capability to develop in-house ICT solutions than outsourcing whenever there is request or pressure. Outsourcing due to lack of awareness could also be avoided by having IT R&D. Moreover, it enables the Bank to continually look at emerging technologies and their application within NBE and other financial institutions.

As a management tool, outsourcing enables the management to answer questions like where are we now, where do we want to be and how do we get there. However, without answering these questions and integrating ITO strategy with business strategy, ITO becomes only tactical tool to achieve low-level goals (Cullen & Willcocks, 2003). Hence, the study recommends that the Bank should have IT/IS Outsourcing strategy that integrates with its business strategy.

Lastly, as it displayed in the Bank's structure, ISMD is under the Corporate Services cluster which means its outsourcing decisions are mostly based on the vice governor of the Cluster decisions who might not understand the criticality of IT issues as he has no IT background. Due to this, the Directorate lacks power to make proper outsourcing decisions on its own. Hence, Directorate should be at vice governor level in the structure to be able take proper actions by itself whenever required. Pfeffer (2010) defines power as the ability to have things your way he indicated that power is needed to put strategic plan in action.

6.4 Future Studies

This study has been conducted as a general approach in studying factors influencing IT/IS outsourcing in case of National Bank of Ethiopia. Using our model, future researchers could study:

1. From the NBE Perspective
    a. Success Factors of IT/IS outsourcing depending on a single system, such as EATS, which is considered as the very successful outsourcing among NBE's IT/IS outsourcings. This could help in overcoming challenges of failure factors of IT/IS outsourcing.
    b. Challenging factors of the neither delivered, nor terminated projects that are running for a decade being planned to be delivered within few months. This could help in minimizing, if not avoiding, being exposed to those factors and take appropriate, timely and corrective decisions.
2. From the Banking Industry in Ethiopia Perspective
    a. Factors influencing IT/IS outsourcing of governmental banks in Ethiopia as it might be different from private banks
    b. Factors influencing IT/IS outsourcing of private banks in Ethiopia as it might be different from governmental banks.
    c. Factors influencing IT/IS outsourcing of the Banking Industry in Ethiopia in order to see if there are similarities or differences in the Industry. This could add value to the IT/IS outsourcing literature, especially because there are only limited studies conducted in developing countries IT/IS outsourcing as per the researchers review.
3. Factors influencing IT/IS outsourcing of other private and public organizations.

6.5 Contributions of the Study

The main contributions of this research are listed as follows:

(1) Contributions of the banking industry: factors affecting IT/IS outsourcing differs from industry to industry. Therefore, there is a need to analyze the determinants of ITO decision in various industries to acquire a better understanding of such factors (Perçin, 2008). While there have been numerous researches conducted on ITO, only a few focused on the banking industry (Baldwin, Irani, & Love, 2001; Gewald & Dibbern, 2009; Jain & Natarajan,

2011). Thus, this study contributes to the ITO literature by empirically investigating factors influencing outsourcing decision of the NBE.

(2) Contributions of a developing country context: Most of existing studies on ITO are confined to Western countries with a severe lack of focus on less developed countries (Bush, Tiwana, & Tsuji, 2008; Lacity, Khan, & Willcocks, 2009). On the other hand, previous researches have provided some evidence that IT/IS research findings in Western and developing countries could differ (2012). As it is indicated in this research, there are reasons specific to developing countries like pressure from international aid organizations influencing the Bank's IT/IS outsourcing. This could not be the case in more developed countries as they don't receive aid from those aid organizations. Therefore, by examining ITO in Ethiopian banking sector (a developing country located in the East Africa), this study tried to fulfill this gap.

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Appendix

Interview Questions

1. Political Drivers
    a. How do you explain government's regulations and restrictions impacting your Information Systems outsourcing?
    b. Are there any legal restrictions on your Information Systems outsourcing?
    c. How does political uncertainty affect Information System Outsourcing?
    d. How does NBE deal with Intellectual Property rights for outsourced IS services?
    e. Are there any other bodies that have influenced NBE's IS outsourcing?
    f. What other political drivers are there to influence IS outsourcing in NBE?
2. Economic Drivers
    a. How do you describe skills of your IT professionals in the ISMD with respect to IT Outsourcing?
    b. How does price fluctuation affect your outsourcing?
    c. How do you explain the market volatility of the IS/IT job vs Information System Outsourcing in NBE?
    d. What other economic drivers are involved in your Information Systems Outsourcing in NBE?
3. Social Drivers
    a. How do you describe the impact of cultural difference of your and your vendor's company?
    b. How do you compare your company's and your vendors work habit?
    c. How do you think difficulties with vendors due to culture difference affect Information Systems Outsourcing?
    d. How do you think difficulties with vendors due to geographical difference affect Information Systems Outsourcing?
    e. What other sociocultural drivers of have impacted your Information Systems Outsourcing in NBE?
4. Technological Drivers

a. How does technological uncertainty affect your Information System outsourcing?
b. How does technological complexity affect your Information System outsourcing?
c. How do emerging technologies affect your outsourcing?
d. What other technological factors pushed you to outsource your IT services?

5. Industry Factors
    a. New requirements from banking industry.
    b. How do you think the availability of multiple suppliers in the market motivate IT outsourcing?
    c. Single vendor dependency:
        i. Is there a single vendor dependency for multiple IS services? What were the reasons to select that vendor?
        ii. How do you describe the impact of single vendor dependency for multiple IS services in your outsourcing?
        iii. Would you like to tell me what you benefited from having single vendor for multiple Information Systems Outsourcing?
        iv. What were the challenges and risks you faced with this single vendor?
    d. Are there any financial sector related drivers for your IS outsourcing?
6. Internal Drivers:
    a. How is Information Systems Outsourcing initiated in NBE?
    b. Do you think that NBE's vision, "To be one of the strongest and most reputable central banks in Africa", could be driver of IS outsourcing? How?
    c. Among those outsourced IS service by NBE, are there systems/services that could be performed by ISMD professionals internally? If so, what were the reasons to outsource them?
    d. Are there any factors that influenced IS outsourcing from business department?
    e. What are other internal drivers of IS outsourcing in NBE?
7. Do you think that the bank is getting what it paid for from IS outsourcing? How?
8. Are there any other comments on factors influencing IS outsourcing that you would like to mention? Anything that I have not covered?

Checklist for Document Reviews

1. NBE's ISMD budget document in order to know what currency is used in planning the budget because the Bank have local and international vendors.
2. SLA between NBE and Vendors to know possible causes agreement termination from both sides and to check whether it is detail enough to include holidays and other days for which vendors do not give support
3. The National Information and Communication Technology (ICT) Policy and Strategy to know the Government's view towards intellectual property rights protection and towards strategic role of human capital development in ICT in Ethiopia
4. Federal Public Procurement Directive to know reasons for bidder disqualifications

Organizational Structure of NBE

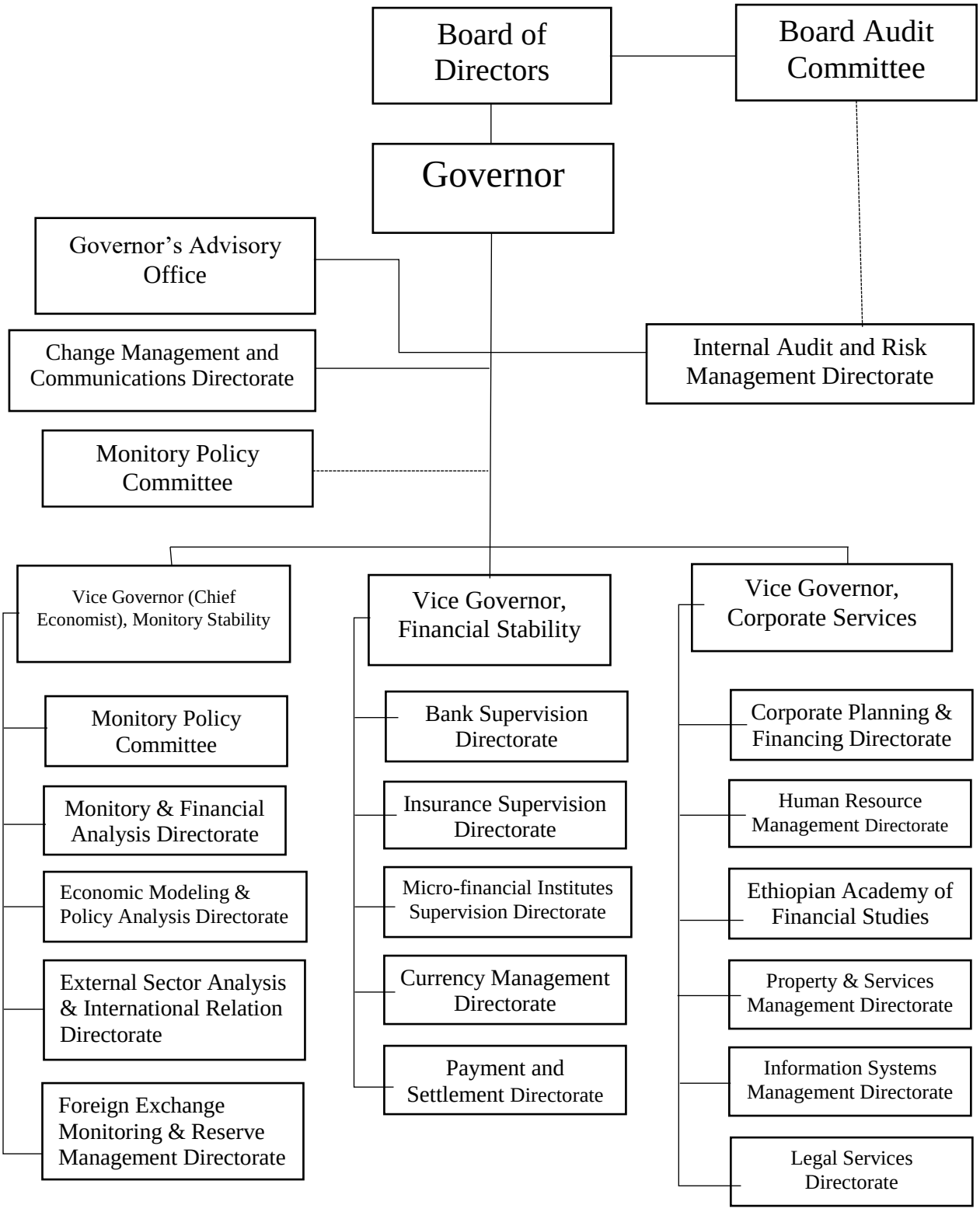

Figure 0-1 Organizational Structure of National Bank of Ethiopia. Source: (NBE, Organizational Structure, 2019)

Summary of Outsourced IS in NBE

No.	Application/Service	Description	Type	Vendor	
				Name	Continent/Country
1.	Ethiopian Automated Transfer System (EATS)	- Custom built application supporting in-country payment clearing process between various banks. System is interfaced to QBS and IFMIS, via file transfer and EthSwith or the national switch.	System development + System support	Montran	Europe/ Romania
2.	Quantum Banking Solution (QBS)	- Critical application that runs banking, funds and account management operations, in-house for various Directorates, and external for various government agencies and financial services organizations. Also handles NBE's financial reporting.	System development + System support	Polaris	Asia/India

No.	Application/Service	Description	Type	Vendor	
				Name	**Continent/Country**
		- It has all relevant core banking modules suitable for regulatory organization. - It is currently interfaced to Ethiopian Automated Transfer System (EATS) and Integrated Financial Management Information System (IFMIS), run by Ministry of Finance and Economic Cooperation (MoFEC).			
3.	Ethiopian Credit Reference Bureau (ECRB)	- Supports credit reference checks by financial services players. - Information is provided to NBE, and held in the system. Banks log into the system to validate creditworthiness.	System development + System support	CompuScan	Africa/South Africa

No.	Application/Service	Description	Type	Vendor	
				Name	**Continent/Country**
4.	Foreign Exchange Import/Export (FEMOS)	- Centralized management of export and import data for purposes of foreign currency tracking, and delinquency management.	System development + System support	Hillmark Ethiopia	Africa/Ethiopia
5.	Society for Worldwide Interbank Financial Telecommunication (SWIFT)	- Facilitates sending and receipt of remittance messages between banks (especially foreign).	System development + System support	SWIFT	
6.	Bank Super Vision Application (BSA)	- Facilitates sending and receipt of bank's supervision report between banks and NBE	System development + System support	Central Bank of Mozambique	Africa/Mozambique
7.	Fleet Management	- Used to managed NBE's fleet with regard to service request, tracking assignment of vehicle to services etc.	Application	Information and Network Security Agency (INSA)	Africa/Ethiopia

No.	Application/Service	Description	Type	Vendor	
				Name	**Continent/Country**
		- The system uses GPS for vehicle tracking purposes.			
8.	Facilities management system	- Used to manage NBE's properties such as building with regard to their existence, location, number and value (it does also track the appreciation and deprecation of the properties)	Application	Information and Network Security Agency (INSA)	Africa/Ethiopia
9.	Property and Service Management System (PSMS)	- Planned to be used for managing the bank's properties and services.	Application		
10.	Human Resource management System (HRMS)	- Outsourced to handle human resource related issues including payroll. - the system was planned to go live within six months of the year 2010 but still not went live	Application	Information and Network Security Agency (INSA)	Africa/Ethiopia

No.	Application/Service	Description	Type	Vendor	
				Name	**Continent/Country**
11.	Access Control and Safety System	- Manages Physical access controls such as baggage screen, fire alarms and burglar alarms. - Also handles tracking attendance, with integration to HRMS	System development + System support	Information and Network Security Agency (INSA)	Africa/Ethiopia
12.	CCTV	- CCTVs are used for environment security purposes at NBE.	System development + Maintenance	West Minister	Europe/England
13.	Website	- Platform for dissemination of NBE information	System development + System support	Techno Brain	Africa/Ethiopia
14.	Data Center Design	- Design of NBE's Data Center		Information and Network Security Agency (INSA)	Africa/Ethiopia
15.	Infrastructure Support for	- Support for NBE's infrastructure	Maintenance	United System Integrators (USI)	Africa/Ethiopia

No.	Application/Service	Description	Type	Vendor	
				Name	**Continent/Country**
	- EATS - QCBS - Virtualization - BSA, - ECRBS				
16.	Virtualization	- Project to help infrastructure usage improvements		United System Integrators (USI)	Africa/Ethiopia
17.	Database support for - EATS - QCBS - ECRBS	- Providing support for the systems	Maintenance	United System Integrators (USI)	Africa/Ethiopia
18.	EATS Upgrade	- Upgrading infrastructure resources of the national payment system	Upgrade	United System Integrators (USI)	Africa/Ethiopia
19.	- VPN Service - Internet Service	- Provide secured connectivity between banks, other financial sectors and NBE - Provide Internet service for the bank users	Service + Maintenance	Ethio telelcoom	Africa/Ethiopia

No.	Application/Service	Description	Type	Vendor	
				Name	Continent/Country
20.	5 Years NBE's IT Strategic Plan	- comprehensive plan used by the IT team to guide the organization over the next years and is based on a gap analysis derived from the current state and the envisioned future state of an organization's ICT environment.		KPMG	

Table 0-1 Summary of outsourced IS in NBE – Source – Own Research

Categorization Table

The following table was used to categorize each interviewee's response according to the conceptual research model. Names of the interviewees were given as 'T', 'B', and 'I'. The sample data in the table below is taken from their responses on how government's regulations and restrictions impacting the Bank's Information Systems outsourcing. The table was used for all categories accordingly.

No.	Code Names		
	T	**B**	**I**
1.	**POLITICAL FACTORS**		
	a. How do you explain government's regulations and restrictions impacting your Information Systems outsourcing?		
	"We as a bank, work under government's rules and regulations. Our procurement is guided by the country's procurement policy. In the Ethiopian Procurement Policy, there are countries to which we cannot outsource. Therefore, we are limited to outsource to only allowed countries. …"	*"There is a government agency that is enforcing government offices to buy systems that could be acquired along with their source codes. However, companies are mostly not willing to give their systems with source codes and our outsourcing is about to be limited to those who are willing to provide us systems with their source codes. …"*	"*When IS outsourcing practiced and implemented government regulation strictly forces to select those least cost bidders. …"*

Summary of Findings

1. Summary of Political Factors Findings

Political Factors	Effect on NBE's IT/IS Outsourcing
Political unrest	- Difficult or no onsite availability of vendors during outsourcing project - Delayed project delivery - Difficult or no onsite support from vendors - Hindering business continuity - Economic crisis - Scarcity of foreign currency - Possible termination of a contract o Due to delayed service delivery by vendors, payment delay by the Bank
Political Pressure from international aid organizations	- Encouraged NBE to outsource systems like EATS, ECRBS and MPSRRS - Standard systems - Lessened the decision power of ISMD on one of their projects
Pressure from SWIFT	- Forced NBE to acquire the SWIFT system - Sole provider dependency.
Pressure from manufacturers and service providers	- Forced the Bank to outsource for the enhancement ECRBS - Forced the Bank to have new version of hardware by stopping support for the older version
Government's initiative	- Forced NBE to outsource - Interrupted the normal procurement process by direct award of a bid - Limited where to outsource by selecting a specific vendor - Limited when to outsource by putting very short delivery time - Limited to whom to outsource by selecting a vendor with which the Bank (especially ISMD) had issues
Government's Directives	- Limited where to outsource - Limited outsourcing strategy by forcing the Bank to follow the least-cost strategy
Directions given by Governmental Agency like INSA	- About to limit outsourcing by limiting where to outsource. Outsource only to vendors who are willing to provide systems along with source codes.

Political Factors	Effect on NBE's IT/IS Outsourcing
Request from other governmental organizations	- Forced NBE to acquire new systems due to the mandate given to the Bank. - Forced NBE to upgrade existing system with numerous new functionalities or replace it -
Intellectual Property Right Protection	- Protected by SLAs, but made the system providers the owners of their systems - Inability in modifying the systems.

Table 0-2 Summary of Political Factors Affecting NBE's IT/IS Outsourcing - source own research

2. Summary of Economic Factors Findings

Economic Factors	Effect on NBE's IT/IS Outsourcing
Increase in currency exchange rate	- Birr devalued - Difficulty in running projects within estimated budget - Delay in project delivery until required amount of budget adjustment is made - Possible cancellation of new projects in order to sustain those existing systems - Increased annual maintenance costs - Increased costs of hardware - Increased costs of software - Increased costs of licenses - Budget shortage to perform other IT activities - Possible contract termination by delaying vendors payment
Price fluctuation	- Budget shortage - Delay in project delivery due to budget shortage - Suspension of new projects in order to sustain the existing systems
Scarcity of foreign currency	- Enforcement of new regulations that might affect vendors (e.g. forcing foreigners not to pay in local currency) - Inability in buying products directly from providers - Excess cost of buying products from local suppliers with high prices - Budget shortage - Delay in paying vendors - Possible contract termination by delaying vendors payment

Economic Factors	Effect on NBE's IT/IS Outsourcing
Shortage of highly skilled IT human resource	- Source of outsourcing - Excessive cost of system development and annual maintenance cost - SLA dependency
Lack of trust on local products and service providers	- Exposed the Bank to buy systems in foreign currency with much higher costs
Unwillingness of local vendors in providing service to governmental organizations	- Inability of getting service/product from local service providers - Exposed the Bank to buy systems in foreign currency with much higher costs - Single vendor dependency
Volatility of IT job market	- Delay in fixing issues - Lessened internal capacity

Table 0-3 Economic Factors Affecting NBE's IT/IS Outsourcing - Source- Own Research

3. Summary of Socio-cultural Factors Findings

Social Factors	Effect on NBE's IT/IS Outsourcing
Cross-language communications	- Caused inability to understand each other on phone communications - Forced them (NBE and Vendors) to communicate electronically (like email, telegram or skype chats) than communicating orally. - Inability in communicating ideas very well as it could have been expressed in native language - Misunderstanding
Public holidays	- Lack of support - Additional cost for phone communications for urgent issues
Organizational culture of vendors	- No support occasions that are unique to some organizational such as first aid and emergency trainings for all their staffs
Work habit	- Timely support from some vendors - Delayed support from others - Timely delivered fixes - Delayed fixes
Geographical location	- Delayed onsite installations - Delayed onsite support/maintenance - Service discontinuity

Table 0-4 Social Factors Affecting NBE's IT/IS Outsourcing - Source - Own Research

4. Summary of Technological Factors Findings

Technological factors	Effect on NBE's IT/IS Outsourcing
Technological Uncertainty	- Forced the Bank to outsource due to its rapidly changing nature (a vendor forced NBE to acquire new version of ECRBS due to the discontinuity of the tool they have used to develop the system and due to lack of programmer on that particular tool)
Technological complexity	- Forced the Bank to outsource (example, EATS and CORE Banking use complex technologies)
Emerging technologies	- Force NBE to outsource (example, the new UV image scanning of cheques),
Obsolescence	- Force the Bank to acquire new system/service/product

Table 0-5 Technological Factors Affecting NBE's IT/IS Outsourcing - Source - Own Research

5. Summary of Industry Factors Findings

Industry Factors	Effect on NBE's IT/IS Outsourcing
Standardization	- Forced the Bank to outsource (example EATS and CORE Banking System) - Enabled the Bank to have standard system
Technological complexity	- The technological complexity behind what the banking industry require has forced NBE to outsource
Market Maturity	- Encourage outsourcing (when EATS was required, the market for this solution was already matured enough and the Bank went for outsourcing)
Availability of multiple suppliers	- Chance vendor selection - Reduce single vendor dependency - Lower switching cost - Lower bargaining power of suppliers

Table 0-6 Industry Factors Affecting NBE's IT/IS Outsourcing - Source - Own Research

6. Summary of Internal Factors Findings

Internal Factors	Effect on NBE's IT/IS Outsourcing
Standardization	- Source of outsourcing - Helped the Bank in having a standard system
Lack of internal system development team	- Direct outsourcing - Extra costs of development - additional annual maintenance cost - additional cost of change request - additional cost of travel - additional cost of communication - delayed maintenance - delayed change request - waste of time with vendors
Lack of internal Capacity building	- Led the Bank to be SLA dependent - Misuse of internal capacity - Exposed the Bank to extra cost such as buying services that could be covered by building capacity of internal experts
Lack of systems' enterprise architecture	- Exposed the Bank to redundant purchase of the same system. - No systems integration - Extra cost of hardware, software, human resources and trainings - Extra cost of licenses
Request from business department	- Source of outsourcing
Lack of awareness	- Source of outsourcing - Higher the cost of acquiring the systems
Time saving	- Helped the Bank in acquiring complex system within time budget

Internal Factors	Effect on NBE's IT/IS Outsourcing
Cost saving	- Not aimed at cost saving directly - Least-cost strategy, but could lead to another extra cost
Lack of outsourcing strategy	- outsource every system development whenever there is a need or pressure - Outsource every system maintenance - Outsource every infrastructure support - Lessening advantages of outsourcing - Low internal capacity building - Misuse/unable to use internal capacity - Led to be led by other parties' recommendations - Structuring and restructuring - Fire fighting - Made the Bank SLA dependent
Internal bureaucracy	- Made ISMD powerless in making decisions related to outsourced projects - source of outsourcing - obstacle to outsourcing - obstacle to capacity building - bid cancellation - delays projects - delays payments - possible contract termination
Organizational culture of NBE	- poor time management - delayed delivery of vendors assignment
Involvement of the top management	- Facilitate outsourcing - Discourage outsourcing also

Table 0-7 Internal Factors Affecting IT/IS Outsourcing - Source - Own Research