

**CHALLENGES OF INFORMATION TECHNOLOGY ALIGNMENT TO
BUSINESS STRATEGY: A CASE OF COMMERCIAL BANKS IN KENYA**

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DECLARATION

This research is my original work and has not presented to any college or university for the award of a diploma or a degree.

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DEDICATION

This thesis is dedicated to the following: First, to my mum Zipporah Agnes. Second, to my sisters and to my nephew Paul. Their love, support, patience, encouragement and understanding gave me the will and determination to complete my postgraduate studies.

ABSTRACT

Organizations may align IT to business strategy so as to realize business objectives such as improved efficiency/turn-around time and maximum return on investment. However, due the rapid changes in business environment and technology; objectives may not be met. Due to the fact that it may be difficult to foresee such disruptions while setting business and IT strategies the study sought to investigate on the challenges of it alignment to business strategy. The study used descriptive survey; it was deemed the best strategy to fulfill the objectives of this study. The population of the study consisted of all the 45 commercial banks that are dully registered with Central Bank of Kenya by 2010. Out of these 32 companies successfully responded. Questionnaires were used to collect the primary data; it was administered mostly to the managers in charge of IT-business alignment. The study targeted IT or strategy development managers of the commercial banks under study since they were in charge of IT and strategy formulation in the companies. Data collected was analyzed by descriptive analysis. Data analysis used the Statistical Package for Social Sciences (SPSS) software while the tables were used to summarize responses for further analysis and facilitate comparison. This generated quantitative reports through tabulations, percentages, and measure of central tendency.

The study revealed that competitive advantage and improved performance were important benefits of information technology in their organization. It was found out that IT department was perceived by the management as a contributor to the alignment of IT to business objectives. Adoption of improved information technology (IT) had benefits to the organization. This benefits include gaining competitive advantage above the competitors, improved performance, faster decision making, growth in revenue and innovation and creativity. It would also enable the commercial banks to meet future needs as well as help address customer needs collected via research and development in their organization in their agenda to achieve alignment of IT to business objectives. By way recommendation, there is need for the IT leadership to understand the business strategy, establish organizational objectives, determine the IT model that best fit their organization and further assess the alignment process. The top level management teams must remain involved in communicating, illustrating, and reinforcing the value and results of IT/business alignment. There is also need for IT audit engagement so as to accelerate or prioritize quantifiable IT organizational alignment and IT improvement process.

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ACRONYMS

IT	Information Technology
TAT	Turn-Around Time
COBIT	Control Objectives for Information and related Technology
ISACA	Information Systems Audit and Control Association
ITGI	IT Governance Institute
CBK	Central Bank of Kenya
KBA	Kenya Bankers Association
IS	Information Systems

CHAPTER ONE: INTRODUCTION

1.1 Background

The term "IT" encompasses the methods and techniques used in information handling and retrieval by automatic means. The means include computers, telecommunications and office systems or any combination of these elements. IT is used to refer to an entire industry. In actuality, information technology is the use of computers and software to manage information. While alignment is the concept of integration is taken one step further, i.e. IT is integrated with the organization's fundamental strategies and core competencies also alignment is the capacity to demonstrate a positive relationship between information technologies and the accepted financial measures of performance.

A strategy is a long term plan of action designed to achieve a particular goal, most often "winning" (Thompson, 2005). According to Pearce and Robinson (1997), strategy is a large scale, future-oriented plans for interacting with the competitive environment to achieve company objectives. Porter (1996), defined strategy as the creation of a unique and valuable position, involving a different set of activities, i.e. different rivals'. Porter continues to say that strategy is making trade-offs, in competing. The essence of strategy is choosing what not to do. Without trade-offs, there would be no need for choice and, thus, no need for strategy. Any good idea could and would be quickly imitated.

Organizations may align IT to business strategy in order to realize business objectives such as improved efficiency/turn-around time (TAT) and maximum return on investment. However, due to rapid changes in business environment and technology, the objectives may not be met. While setting business and IT strategies, it may be difficult to foresee such disruptions some of which might not have been addressed or expected by experts over years. Considering the stated rapid organizational and technological changes, there may be perception that it is unrealistic to align IT to business strategy. This lead to perception of not including IT when putting up overall strategic plan (Brynjolfsson, 1990).

Business people who appreciate and multi-skilled strategists with adequate skills in both IT and business. This might streamline strategic misfit from aligning IT to business strategy. Paradigm shift in how the alignment of IT to business strategy has been done over years (Orlikowski, 1996). According to Arveson, (1998), a system comprises of hardware, software, people, procedures and data, integrated with the objective of collecting, storing, processing, transmitting and displaying information". Information systems are implemented within an organization for the purpose of improving the effectiveness and efficiency of that organization. Capabilities of the information system and characteristics of the organization, its work systems, its people, and its development and implementation methodologies together determine the extent to which that purpose is achieved.

In information technology and on the Internet, infrastructure is the physical hardware used to interconnect computers and users. Infrastructure includes the transmission media, including telephone lines, cable television lines, and satellites and antennas, and also the routers, aggregators, repeaters, and other devices that control transmission paths. Infrastructure also includes the software used (Ciborra and Lanzara, 1990). According to Henderson and Venkatraman (1993), integration between business and information systems (IS) planning, rational-adaptation in IS planning, IT managerial resources, and IT implementation success are all factors likely to influence alignment. Their relative importance, however, is very much dependent on the organizational context, the timing of the study, and on whose perspective is being sought.

1.1.1 IT Management Framework

Control Objectives for Information and related Technology (COBIT) is a set of best practices (framework) for information technology (IT) management created by the Information Systems Audit and Control Association (ISACA), and the IT Governance Institute (ITGI) in 1996. COBIT provides managers, auditors, and IT users with a set of generally accepted measures, indicators, processes and best practices to assist them in maximizing the benefits derived through the use of information technology and developing appropriate IT governance

and control in a company. Ciborra (2000) argues that strategic control is unobtainable due to the complexities and multiple influences pulling the organization in different directions. Also, according to Ciborra (2000) aligned infrastructure is a rare occurrence that provides no clear-cut explanations, which are difficult to manage with approaches that are suited to mechanical organisations. Until recently, the depth of analysis into the interactions between IT and business units has received limited consideration in literature (Gordon & Gordon 2000).

Orlikowski (1992) develops a structurational model for describing relationships and interactions between technologies and organizations. Technologies have impact on organizations, their behavior and structure. In turn, organizations and humans influence the use, the meaning, and further advances of technologies. Hence, technologies are just one relevant part in a complex social system (Orlikowski, 1992). In the late 1980s, the deficiency in measuring IT using purely financial measures was addressed by Parker, Benson, and Trainor (1988) in their book on information economics. The goals of an IT balanced scorecard include the alignment of IT plans with business objectives, the establishment of measures of IT effectiveness, the directing of employee efforts toward IT objectives, the improved performance of technology, and the achievement of balanced results across stakeholder groups. CIOs, CTOs, and other technical managers can achieve these goals by considering multiple perspectives, long- and short-term objectives, and how the IT scorecard is linked to other scorecards throughout their organizations (Ciborra, 2000).

Over the past decade, many CIOs have realized that it is not sufficient to manage merely the IT end of the business. The integration of IT strategy to business strategy must be managed as well. The tool chosen for this task is the balanced scorecard. The Working Council for Chief Information Officers (2003) did an extensive review of IT scorecards and found that the most advanced scorecards shared the following six structural attributes: Simplicity of presentation. The very best scorecards are limited to a single page of from 10 to 20 metrics written in nontechnical language. Explicit links to IT strategy; the scorecard should be tightly coupled to the IT strategic planning process and assist in tracking progress against IT's key goals and objectives. Broad executive commitment; both senior IT as well as senior business managers should be involved in the scorecard process both creation and ongoing. Enterprise-standard

metrics definitions; Consensus should be quickly achieved on metrics definitions. The review meeting should focus on decisions rather than debate over metrics. Drill-down capability and available context; the high-level IT scorecard should allow for detailed review of trends or variance by providing more granularities on component elements. Individual manager compensation; should be linked to scorecard performance.

Due to its dynamism, it becomes increasingly difficult to align IT to business strategy. In some cases, IT may not be involved in designing overall business strategy. Business units might not be aware or may ignore IT dynamism and other unpredictable factors such as human behavior of management/clients and events that require frequent adaptations/re-inventions of the initial system. For an organization to remain competitive there is need for constant reordering of people and resources during organizational changes as dictated by situation Ciborra (2000).

1.1.2 Commercial Banks in Kenya

The Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK), govern the Banking industry in Kenya. The banking sector was liberalised in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance's docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. The CBK publishes information on Kenya's commercial banks and non-banking financial institutions, interest rates and other publications and guidelines (finaccess, 2010).

There are forty-three commercial banks and non-bank financial institutions, fifteen micro finance institutions and forty-eight foreign exchange bureaus in Kenya. Thirty-five of the banks, most of which are small to medium sized, are locally owned (Central Bank of Kenya annual report 2007). The industry is dominated by a few large banks most of which are foreign-owned, though some are partially locally owned. Nine of the major banks are listed on the Nairobi Stock Exchange. The banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby for the banks' interests and addresses issues affecting member institutions. The commercial banks and non-banking financial institutions offer corporate and

retail banking services but a small number, mainly comprising the larger banks, offer other services including investment banking, insurance services and custodial services among others (Dikken and Hoeksema, 2001).

Banks represent a significant and influential sector of business worldwide that plays a crucial role in the global economy. Commercial banks are financial intermediaries that serve as financial resource mobilization points in the global economy. They channel funds needed by business and household sectors from surplus spending to deficit spending units in the economy. A well developed efficient banking sector is an important prerequisite for saving and investment decisions needed for rapid economic growth. A well functioning banking sector provides a system by which a country's most profitable and efficient projects are systematically and continuously funded. The role of banks in an economy is paramount because they execute monetary policy and provide means for facilitating payment for goods and services in the domestic and international trade (Shambe, 2003).

Commercial banks are custodians of depositor's funds and operate by receiving cash deposits from the general public and loaning them out to the needy at statutorily allowed interest rates. Loans are based on the credit policy of the bank that is tightly coupled with the central bank interest rate policy. These in effect determine the level of financial risk in a particular bank. Development of the Kenyan economy especially after the 1990's saw the use of computers and communication technologies in data processing in many business areas as well as for communication. This development has led to establishment of many big, medium and small scale information technology and information system firms in Kenya that offer technology services such as software development (Mailu, 2001).

Technology strategy stems from the impact of information technology and the intent on the conduct of organizations, managers and workers alike. Banks in Kenya have aligned their business to It and various innovation have been achieved that have a great effect on competitive advantage for banks. Due to alignment of technology and innovation strategies, the banks have gained benefits such as higher customer satisfaction, expanded market share, Effective selling of products and services, reduced operations turnaround time and eventually led to increased profits. Product innovations and alignment are introduced to respond better to changes in market

demand or to improve the efficiency of services provided. This is in line with this that the major mobile phone companies in Kenya i.e. Zain and Safaricom have come up with mobile phone money transfer services M-pesa and Zap to tap the potential for small scale transactions at reasonable costs. Banks are constantly innovating on Mobile Banking services, swift transfers and the more recent electronic share dealing at the Nairobi stock exchange.

1.2 Statement of the Problem

Alignment between business strategy and information technology (IT) has been a key concern for both IT and business managers for several decades. It is recognized that achieving alignment contributes immensely to ensuring that investments in IT result in improvements in organizational performance (Hall and Liedtka, 2007). Alignment is a major concern for commercial organizations, many who have invested heavily in IT for ATMs and Communication purposes, as well as to improve efficiency and effectiveness of administrative processes Henderson, and Venkatraman, 1993). The business and IT performance implications of alignment have been demonstrated empirically and through case studies during the last decade Alignment leads to more focused and strategic use of IT which, in turn, leads to increased performance (Chan *et al.*, 2006).

Sauer and Burn (1997) warn that alignment can give rise to pathologies that require careful management if undesired business and IT costs are to be avoided. Three types of pathological outcomes from strategic alignment are identified: misalignment, which occurs when a company tries to align IT with business strategies that are not internally consistent; IT stagnation, which occurs as part of a common, almost natural, cycle of innovation; and IT and globalization, which presents special scale and cultural difficulties for alignment In the light of the complexity of IT alignment, it could be proposed that IT and business are independent. Study will also investigate ways in which IT may be aligned to business strategy for optimal returns on IT investment using existing IT management tools such as the standard IT balanced scorecard as provided in Control Objectives for Information and related Technology (COBIT) framework. Critics of IT alignment research argue that in the world of work, alignment does not succeed because strategy is not a clear concept due to various turbulent, unpredictable circumstances that

leave managers muddling through, betting, and tinkering with their corporate strategies (Vitale *et al.*, 1986). Tightly coupled arrangements can have negative outcomes especially in turbulent times. That is, if the business environment suddenly changes and alignment is too tight, businesses may have difficulty adjusting to their new environments.

In this research we review IT planning practices of banks with focus on strategic planning and process of aligning IT to business strategy. Research will be done to see how banks with established IT departments, undertake strategic planning and do IT alignment handle the process. More efforts will be put towards evaluating how other banks handle the process where IT and business planning are done separately without any interference between the two functions i.e. separate IT alignment/planning and business strategy. The study will seek to answer the research question below; Given the challenge of IT-business strategy alignment in the Kenyan context, how well are Kenyan firms dealing with it in practice?

1.3 Research Objectives

- i. To investigate current practice- how IT Manager/CIO's align IT-strategy in Kenyan banks
- ii. To examine how well they achieve it, that is, the outcome
- iii. To establish any challenges encountered given the complexity of IT –strategy alignment as a goal.

1.4 Importance of the study

Management

This study was of critical importance to the management of organizations in general. Today's turbulent environment requires creation of a sustainable competitive advantage through IT. The current research project work was useful as a reference to building a business strategy that is aligned with IT of companies. The study tried to explain and answer why some of the strategies implemented in the industry fail leading to a well informed strategy formulation.

Policy Maker

The policy makers found the findings of this study useful for future decisions regarding adoption of IT and employee performance in Kenya and the general public can use these findings to find ways of improving employee performance through IT.

Academicians

Researchers also benefitted from this study as it adds to our knowledge of strategy-IT relationship in the Kenyan context and opens up new areas for research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Having looked at the background of the problem and the problem statement in chapter one, this chapter looks at what other researchers have done as relates to the topic. We now look at the concept of strategy, aligning IT Strategy and processes with business strategy.

2.2 Strategy

According to Grant, (2002) there is no agreed all embracing definition of strategy. Indeed, strategy is an elusive and somewhat abstract concept. He argues that this is expected when dealing with an area that is constantly developing. Strategy is the direction and scope of an organization over a long term. Strategies are systematic choices about how to deploy resources to achieve goals (Smith, 1999). Johnson and Scholes (1999), page 10, have given a good definition of the concept of strategy. To them, strategy is, “the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a changing environment, to meet the needs of markets and to fulfill stakeholder’s expectations”

Mintzberg (1996) proposes five formal definitions of strategy as plan, ploy, pattern, position, and perspective. Strategy is a plan, some sort of consciously intended course of action, a guideline (or set of them) to deal with a situation. As a plan, a strategy can be a ploy too; really just a specific “manoeuvre” intended to outwit an opponent or competitor. Strategy is a pattern, specifically a pattern in a stream of actions. Strategy is a position, specifically a means of identifying where an organization locates itself in what is known in the management literature as an “environment” for a business firm, usually a market. Strategy is a perspective, its content consisting not just of a chosen position but also of an ingrained way of perceiving the world.

Strategy development is a multidimensional process that must involve rational analysis and intuition, experience, and emotion. But, whether strategy formulation is formal or informal, whether strategies are deliberate or emergent, there can be little doubt as to the importance of systematic analysis as a vital input into the strategy process. Without analysis, the process of strategy formulation, particularly at the senior management level, is likely to be chaotic with no basis for comparing and evaluating alternatives. Moreover, critical decisions become susceptible to the whims and preferences of individual managers, to contemporary fads, and to wishful thinking (Grant, 2002).

According to Chan (2006) concepts, theories, and analytic frameworks are not alternatives or substitutes for experience, commitment, and creativity. But they do provide useful frames for organizing and assessing the vast amount of information available on the firm and its environment and for guiding decisions, and may even act to stimulate rather than repress creativity and innovation. The benefit of strategy is not just offering simplification and consistency to decision making, but the identification of strategy as the commonality and unity of all the enterprises decisions also permits the application of powerful analytical tools to help companies create and redirect their strategies. Strategy might help the firm establish long term direction in its development and behavior (Chan, 2006).

A fundamental concern is what the firm (or the individual or the organization more generally) wants to be in the future. Such a view is often made explicit in a statement of company vision. The purpose of such goal setting is not just to establish a direction to guide the formulation of strategy, but also to set aspirations for the company that can create the motivation for outstanding performance. Joshi and Porth (2003), argue that a critical ingredient in the strategies of outstandingly successful companies is what they term “strategic intent” an obsession with achieving leadership within the field of endeavor.

2.3 Alignment of IT to Business Strategy

As versioned by Hall and Liedtka(2007), the need for congruence between an organization’s business strategy and information technology strategy is a widely held IT precept across a broad range of other industries, though may not be believed widely appreciated. Understood or not, information technologies do have substantial potential both to alter and to

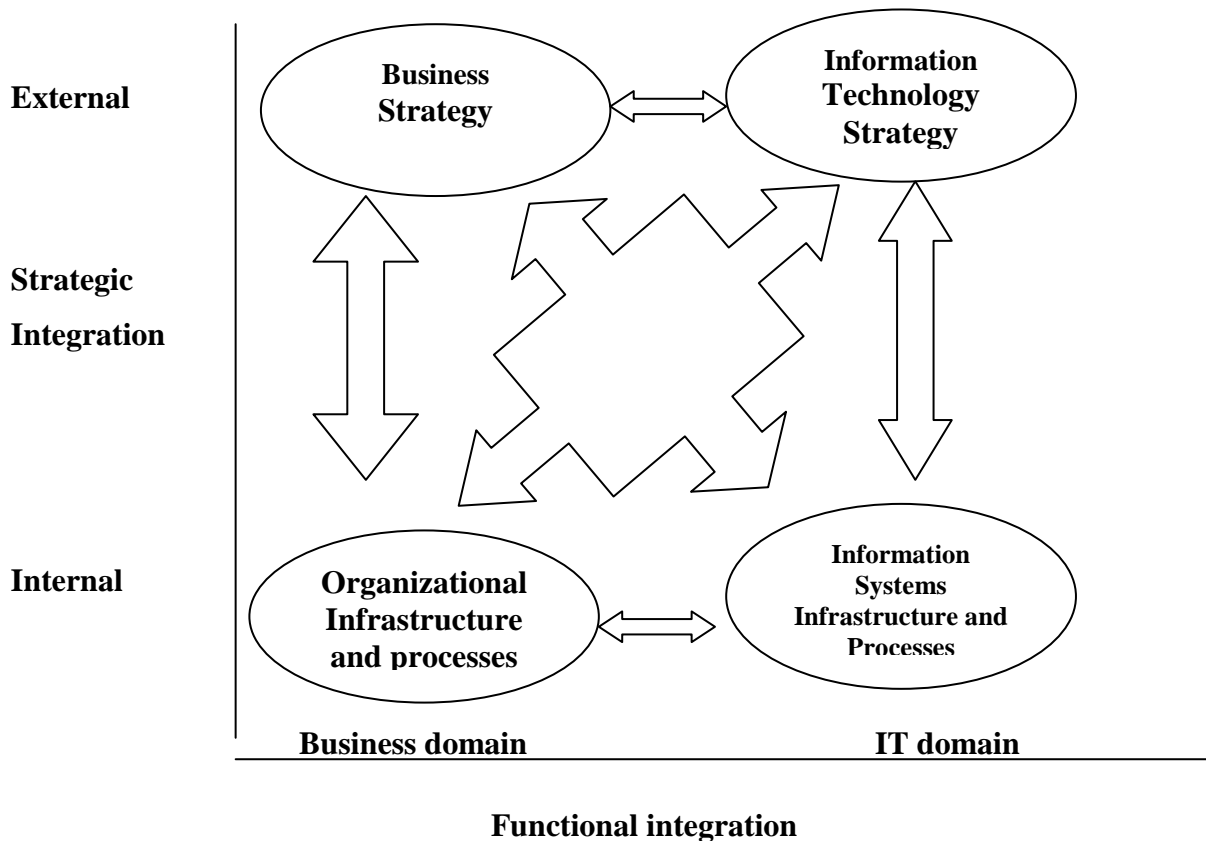
support the way banks manage and assess their business activities, to simplify and improve banks processes efficiency, and to enable completely new products or other new business opportunities.

According to Hall and Liedtka (2007), IT can facilitate better information flows for internal communication (up, down, and sideways in the organization), and more complex software knowledge management systems allow better information flow about market information, accelerate anticipating client needs, help feed product development, and speed information flow back to decision makers. Conversely, changes such as rapid growth in client numbers and in product diversity or new business models and strategies will all alter the nature of information flows and supporting technologies needed (Hall and Liedtka, 2007).

According to Mankin, Cohen and Bikson (1996), the business and technology sides are complementary and co-dependent. Hence, firms need to view information systems as strategic-level assets rather than as just administrative support. This will require a substantial shift in organizational cultures across the industry. Furthermore, misalignment between business strategies (e.g., product mix, target clients, pricing strategies, and external alliances) on one hand and the IT strategies (e.g., performance, cost, hardware configuration, interconnections, features, degree of flexibility, and security) on the other results in decreased business performance. To promote congruence, firms must develop business and IT strategies concurrently, rather than attempt to link separately developed strategies after the fact. A related management improvement that has been identified is the need for better strategic planning for how IT expands as an institution grows. With growth, processes previously put in place will need to change and IT needs to adjust with it. Business processes should link directly with technology processes in all cases (Arveson, 1998). Achieving congruence, planning for growth, and linking processes all necessitate a close working relationship between corporate and IT management. To foster this linkage, the movement in core banking software for traditional large-scale banking is to integrate workflow and business process management components into IT software packages. Designers of microfinance IT packages should pursue similar integration as well, as a key target in the innovation roadmap of particular importance in achieving strategic congruence is the business knowledge of technology executives.

A firms need technology managers with specific working knowledge of their businesses so that controls over both the information systems and the processes by which they are developed and maintained and other essential control procedures are designed, implemented, and assessed in close collaboration with those developing business strategy. Isolation of IT planning from business planning is a natural consequence of banks' tendency toward buying off-the-shelf IS packages (Smith and Reece, 1999). According Arveson (1998), important IT decisions will be made off-site by vendors who may not fully understand businesses and the own business decisions made without solid understanding of the IT issues involved. In such cases, research from other industries suggests that several areas of core business knowledge are at risk of misinterpretation and misalignment. Moreover, conflicts can arise between operating needs and a vendor's incentive to minimize costs. For instance, rather than tailoring solutions to the specific strategic objectives of the banks, the outsourcing vendor may tend toward one-size-fits-all for its many buyers.

Figure 2.1: Evolution of Strategic IT Alignment Thinking



Source: Peppard and Karin (2003)

The figure above shows dynamic alignment between business strategic context and IT strategic context. Assesses range of strategic choices facing managers and how they interrelate.

Successful organizations have recognized that computers and communications technology can fundamentally alter the very nature of organizational work. This in turn often requires the rethinking of the strategy of the organization with a subsequent remaking of its basic structure and processes. Strategic alignment is based on the premise that the inability to realize value from IT investment is, in part, due to the lack of alignment between the business and IT strategies of the organization (Henderson and Venkatraman 1993).

A more strategic role within organizations can be achieved when IT forms a connection with strategic management and this alignment is achieved through mechanisms including governance processes; value management; human resources capabilities and technological capabilities. Venkatraman (1993) put forward a framework for continuous strategic alignment composing of two components, namely analytical component (strategic alignment) and administrative component (achieving alignment). Business strategy is defined in many ways and many different schools exist including rationalistic with a planning, design or positioning perspective or the descriptive school with a cultural, political, learning, cognitive and emerging perspective (Eden & Ackermann 2000).

The characteristics of business and IT alignment proposed by Luftman, Papp and Breir (1999) include improved relationships between functional areas, work together in strategy development, communicate in a manner that is understandable to all, executive commitment and prioritize more effectively. Although Venkatraman (1993) and Luftman, Lewis and Oldach (1993) have attempted to capture strategic alignment within prescribed models, Venkatraman (1993) acknowledges that alignment is of a dynamic nature and will always need to evolve in order to maintain continuity. Gordon (2000) considers the nature of the interactions between business and IT units to be an important element of a company's competitive success and is a key determinant of success or failure. Design issues associated with the organizational structure of lower level functional groups to be more complex and interesting, because they are affected not only by strategy, but also by the structure of the firm.

2. 4 Challenges of IT alignment to business Strategy

Challenges related to knowledge refer to the central problem that IT executives are not always privy to corporate strategy, and that organizational leaders are not always knowledgeable about IT. Also, managers are not always knowledgeable about key business and industry drivers. Ciborra (1997) argued that the dominating and rational top-down planning approaches to strategic alignment within IT do not reflect the practices that can be observed in actual organizations and management behavior. He claims – rather polemically – that the IT-research of strategic alignment has failed and that new papers addressing this topic as a result deliberately avoid using this concept (Ciborra, 1997b). Alignment is modeled as a bridge between business strategy and IT infrastructure, and to Ciborra this is an attempt to bridge two extremely unstable variables. This is bound to fail, since strategy ends up in “tinkering” or “bricolage” (Ciborra, 1991) and the IT-infrastructure tends to “drift”: there is no observable alignment, nor measurable fit, because strategy now is de facto bricolage, while the technology is mostly “out of control” (Ciborra, 1997b, p. 69). Alignment models are theoretical abstractions that only exist in an “objective” world. Researchers develop these models in order to raise management awareness. New management practices usually develop then when managers tend to grant essence and existence to the models which again leads to breakdowns and “ultimate impotence” (Ciborra, 1997b, pp. 70f).

Within many organisations IT is no longer just a support function for core business processes. It also is an enabler of internal efficiencies and competitive advantages. As the role of IT continues to expand, enterprises increasingly require greater alignment between their business and IT strategies, as well as the means to continuously measure the value IT provides. Although IT is the core it faces several challenges in its path and the following are some of the major challenges they face when we try to align IT to business strategies.

2.4.1 Elevating IT Skills and Training as Strategic Assets

According to Cule, Schmidt, Lyytinen and Keil (2000), they assert as part of treating IT systems as strategic assets, firms need to expand their investments in information technology

and skills, both absolutely and as fraction of overall expenses. A substantial gap remains between the prices of the skills banks need and the typical bank's current willingness or ability to pay. This may be fundamental problem, stemming in part from the lack of appreciation by bank upper management of the strategic potential of back-office information systems. Banking information systems are obviously critical to the business success of mainstream modern, high-tech banking, and investment firms; yet, in microfinance organizations, IT people are, often thought of as "simply a helpdesk for assistance with running desktops."(Feurer, Chaharbaghai, Weber & Wargin, 2000)

According Gordon & Gordon (2000), as part of recognizing the strategic value of information, banks can develop a culture of continuous training (seminars and workshops) and skills upgrading, to foster better familiarity with emerging technologies. Some training for personnel, loan offices, managers, and clients would be simply in using the equipment and software properly. Along these lines is the need for closer collaboration with and support from IT vendors. There remains significant potential in developing training tools, including electronic, Internet-based approaches, but the industry has not yet focused on developing such tools. At a higher strategic level, moreover, the industry also might need to improve project management skills for more effective technology implementation. Technical personnel too often have the technical skills but not enough understanding of business processes.

2.4.2 Risk and security

Along with the increased strategic importance of information technologies to banks comes increased levels of risk should those systems fail or data security be compromised. Yet, most banks appear not to have ongoing risk management planning processes in place. Thus, another target area for improving the sector IT is in improving risk and security management. System security may need to be increased in proportion to what is protected. As bank fund volumes, client numbers, and data volumes grow, system security and reliability (of individual transactions, personal information, software applications, whole databases, and entire data networks) should become on par with that expected in retail banking. The consensus was that most banks remain far from that benchmark (Reich & Benbasat, (2000).

Key innovation needs include developing methodologies for identifying potential technical and operational vulnerabilities and assessing potential impacts (e.g., expected costs, client service interruptions, and data corruption) and then developing tools for reducing those risks. Elements for identifying vulnerabilities include evaluating communications and power infrastructures, computer system architecture, and the individual elements such as routers and modems (Reich & Benbasat, (2000).

According to Joshi and Porth, 2003), a risk-related topic only briefly discussed is how IT affects security of bank personnel, particularly in the field. Operating procedures that require loan officers to travel with substantial cash on hand create targets for bandits. Information technologies can help reduce such risks but can also increase them. Loan officers carrying expensive PDAs can also attract untoward attention. Hence, similar risk and impact assessment methodologies are needed for application to field operations.

2.4.3. Promoting Complementary External Changes

Finally, some of the biggest barriers and highest potential payoff opportunities related to business information systems are external, beyond the direct control of individual businesses. However, with growth comes influence. According to Mankin et al, (1996) large organizations have collectively lobby and actively work for change in a range of complementary external arenas, including infrastructures such as Internet and mobile networks and regulations. The single most important variable differentiating (politically stable) regions where organizations have grown most quickly from those where it continues to struggle. Regulations to protect client assets and the stability of national financial systems are important; yet, those in place for traditional banking often inhibit microfinance, with its alternative approaches to things such as collateral, group liability, or banking with mobile branch locations (Mankin. et al. 1996).

2.4.4 Corporate strategy is unknown

A recurring issue seen in previous alignment research is that often corporate strategy is unknown (Reich and Benbasat, 2000) or, if known, is unclear and/or difficult to adapt (Baets, 1992). This poses a significant challenge because most models of alignment presuppose an existing business strategy to which an IT organization can align itself.

Formal business strategies are often too ambiguous for business managers to understand (Campbell, 2005). Managers face ambiguity surrounding the differences between espoused strategies, strategies in use, and managerial actions, many of which may be in conflict with one another. This issue of comprehension can be both internal and external to the IT organization. Internal comprehension is affected by mental models and world views, relationships, shared domains of knowledge, and shared systems of meaning. External comprehension is influenced by education and training, the organizational structure and visibility of the IT staff in the structure, and the IT environment. Failures or weaknesses in any of these areas may result in poor alignment.

2.4.5 Lack of awareness or belief in the importance of alignment

Although there is empirical support for the notion that alignment provides organizational value, many business managers are unaware of the importance of IT alignment and/or have little belief that IT can solve important business problems (Baets, 1996). For instance, in Baets' study of European banks, it was found that the influence of mindsets on IT alignment awareness was significant. Although there was a trend in the use of IT from a support function to a competitive capability, and IT issues were perceived to have a great influence on the banking industry, there was no strong and clear belief that IT could solve specific banking problems. Those managers who could see specific ways to solve banking problems via IT had more positive attitudes towards IT strategy and planning. Similarly, a study by Vitale and colleagues revealed a strong relationship between IT-knowledgeable management and system identification processes that were viewed as satisfactory (Vitale *et al.*, 1986).

Henderson and Venkatraman (1993) found that managers were more comfortable with their ability to comprehend business positioning choices (i.e., where products are sold) rather than IT positioning choices (i.e., critical technology to support business strategies). This was attributed to the fact that strategy has typically been viewed as something applied to the output market, and that IT has typically been viewed as an internal response (or an input) to business strategy as opposed to something that leverages business strategy.

2.4.6 Lack of industry and business knowledge

Baets (1996) found IT alignment was hindered by a lack of knowledge about the banking industry (not just skills and knowledge about IT) among banking managers. In particular, it was found that IT alignment was negatively influenced by the following industry factors: (i) when awareness of the banking industry issues was low and (ii) when the interaction of different aspects within the corporate strategy was not well known to managers. Therefore, before managers could use IT solutions to help solve their banking problems, a deeper knowledge of the banking industry itself was required.

In a multiple case study of insurance business units, Reich and Benbasat (2000) showed that shared domain knowledge between business and IT executives was the strongest predictor of the social dimension of alignment. When shared domain knowledge was high, communication between the two groups was strategic and frequent, and the result was a high level of alignment.

2.5 IT Strategy-Alignment practices in African context

Jensen (2000) reports that the average usage of technology in African countries is still very low due to high connection fees. Communications are mostly done with people outside the continent. Most users are NGOs, universities or private companies and users are mainly male and well educated. Jensen (2002) further posts that e-mail is used for correspondence, document exchange, technical advice, managing projects, arranging meetings, and exchanging research ideas, but it is still limited for accessing formal information resources. 25 % of e-mail is replacing faxes, 10 % e-mails replacing phone calls and 65 % of the e-mails standing for communication that would not have been made without an e-mail-system. Users report that Internet has increased efficiency and reduced information costs, although it is still an under-utilized resource. Implementation of IT in Kenyan small business has been slow. Kenya has traditionally been very quick in its uptake of new technology and ideas, yet has not been as entrepreneurial with e-commerce technologies (Waden and Ng'etich, 2006)

Business owners/managers are unlikely to adopt and align more sophisticated IT if they are not familiar with the more basic ones. Hence, there is a strong argument for researchers to

focus studies of small business use of the IT adoption of entry-level technologies. Once small business has adopted Internet technologies at entry level, they can get familiar and comfortable with the Internet and, in time, move on to adoption of more sophisticated IT (Warden and Ng'etich, 2006). They argue that even basic IT can provide tangible benefits to small business users. For many small and large firms in Kenya, information and communication technology is viewed as potentially capable of bringing in some benefits. The high rate at which organizations are buying mobile phones, computer hardware and software as well as using the internet for information and communication is evidence of the increasing awareness of information and communication technology has in the Kenyan market. The business benefits of using information and communication technology include access to new technology and attainment of competitive advantage.

In production enterprises, the most valued IT was mobile telephony and internet as these enhanced the speed and reliability of communication. Use of computers and software to improve production, inventory and accounting was next in line. The curio and craft dealers felt that mobile telephone, email and fax were the most valued aspects of IT as these would keep them in touch with overseas agents and customers. Companies like Kenya Power & Lighting Company which have aligned their IT with their business strategy are gaining a lot from the reduced cost of doing business as well as being a competitive company in the region and this is evident in the reduced number of complaint from their customers as well as reduced cost of pay staffs who have to go to the field to read meters.

2.6 Summary

The literature review indicates that alignment of business and IT strategy is believed to improve organizational performance top management must incorporate a degree of high level planning, because developments and the building of infrastructure cannot be carried out in a random manner with bottom-up disjointed developments. Parties need to formulate coherent priorities for business decisions and their subsequent technical implications (Janis, 2006).

Literature also suggests that alignment of IT with business strategy improve business performance. Business performance may be defined as the well-being and strength of the enterprise relative to its competitors. Alignment of IT with business strategy and other organizational requirements is believed to improve organizational performance and enhance competitiveness (Reich and Benbasat, 2000). Researchers also argued that a firm's inability to realize sufficient value from its IT investments is due in part to an absence of strategic alignment (Presley, 2006).

This research shows that at there exists a gap where the mismatch resulting from aligning IT to business strategy might have spilt to work places in real life disputes between IT department and business sides. This conflict may contribute to frustration, resistance and lack of goodwill when realizing business goals. This challenge can lead to delays in early realization of return in investment on IT assets with benefits accrued after maybe towards three years after the IT infrastructure is tending to zero value in the books and more personnel have embraced technology. Despite much expectation from business side for quick gains, IT instead is seen as a wrong investment move with real benefits realized sometimes after one year at minimum (Ciborra, 2000). When IT is aligned to business strategy major gains can be achieved but in many cases the alignment might fail to achieve its intended goal because managers do not understand or are not well trained to merge the two. This failure thus makes us study the challenges many managers face when undertaking the alignment process.

2.7 Conceptual framework

IT Business Strategic Alignment is defined as the degree to which a company employs the systems that support strategic orientation. Chan *et al.* examined whether the impact of IT on performance may not be a direct one, but intermediated by other factors, such as the alignment between Business Strategy and IT Strategy (Melville et al, 2004). Chan et al modified the well-known STROBE model (STRategic Orientation of Business Enterprises) of Venkatraman (1989) to include performance at the IT level as well as at the business unit level.

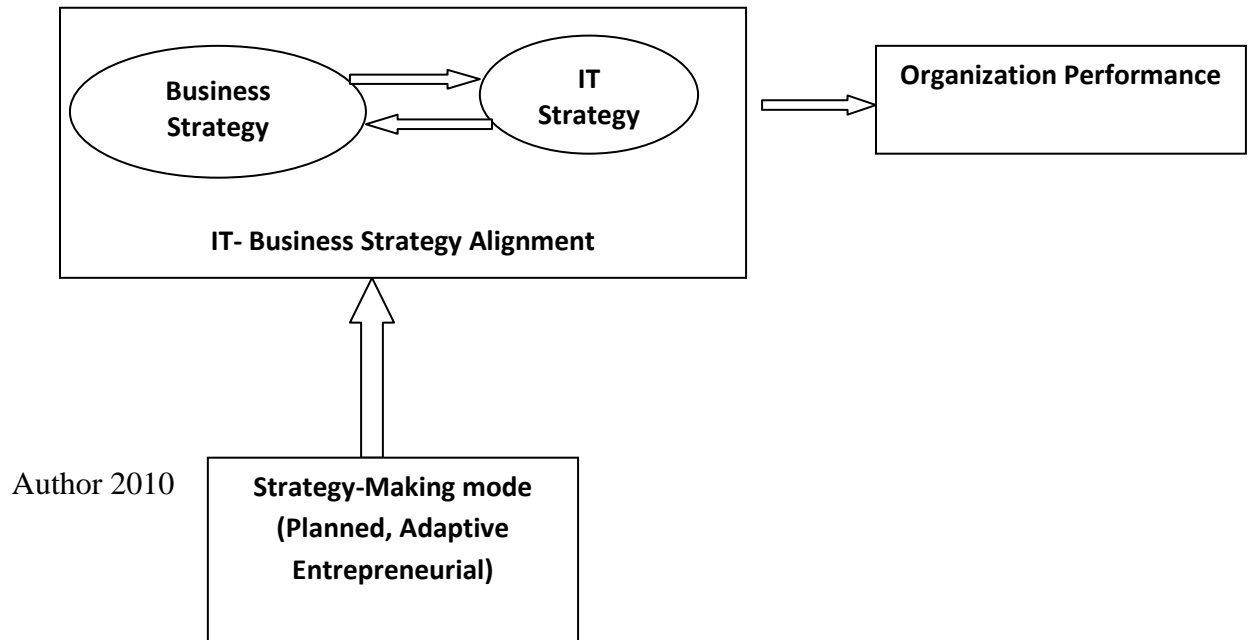


Figure 2.2 Framework linking IT strategic alignment to business performance

The above framework shows how the business strategy aligns with IT strategy. The alignment is executed by the strategy-making mode which are planned and adaptive entrepreneurial. The outcome of the alignment is increase in organisation performance. In the framework we see that aligning IT strategy with business strategy is vitally important to managers of various organisation. The framework can guide us to argue that strategic alignment can be understood as an enduring competency that allows the organization to respond to the rapidly changing competitive environment. When organizations have developed this competency, they are well-positioned to sustain strategic alignment over time.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out various stages and phases that were followed in completing the study. It involved a blueprint for the collection, measurement and analysis of data. In this stage, most decisions about how research was executed and how respondents were approached, as well as when, where and how the research was completed. Therefore in this section the research identified the procedures and techniques that were used in the collection, processing and analysis of data. Specifically the following subsections were included; research design, target population, sampling design, data collection instruments, data collection procedures and finally data analysis.

3.2 Research design

Research design is the plan and structure of investigation so conceived as to obtain answers to research questions. The plan is the overall scheme or program of the research (Robson, 2002). In this study a survey design was used. This research problem could best be studied through the use of a descriptive survey. Descriptive research portrays an accurate profile of persons, events, or situations (Saunders, Lewis and Thornhill, 2003). Surveys allow the collection of large amount of data from a sizable population in a highly economical way. Therefore, the descriptive survey was deemed the best strategy to fulfill the objectives of this study.

3.3 Study Population

The population of study consisted of all the 45 commercial banks that are dully registered with Central Bank of Kenya by 2010.

3.4 Data Collection Procedures and Instruments.

Data collection is gathering empirical evidence in order to gain new insights about a situation and answer questions that prompt undertaking of the research (Kothari, 2004). A Questionnaire was administered mostly to the managers in charge of IT-business alignment. The use of questionnaires was important in this case because of the issue of anonymity of the respondents in that they can respond without fear of being known or identified hence accurate and correct information is received. The questionnaires adopted use of IT Balanced scorecard of the COBIT framework and Venkatraman (1993) guidance in measuring IT alignment. COBIT is an IT framework and supporting toolset that allows managers to bridge the gap between control requirements, technical issues and business risks. COBIT enables clear policy development and good practice for IT control throughout organizations. COBIT emphasizes regulatory compliance, helps organizations to increase the value attained from IT, enables alignment and simplifies implementation of the COBIT framework. Secondly, it can cover a large number of people at a relatively affordable cost and it also limits interviewer bias (Mugenda & Mugenda, 2003). The questionnaire was administered to IT or strategy development managers of all commercial banks in Kenya. We were targeting them since they were in charge of IT and strategy formulation in the companies.

3.5 Data Analysis

Data collected was analyzed by descriptive analysis. According to Myers, M. (1997), the descriptive statistical tool helps the researcher to describe the data and determine the extent to be used. The findings were presented using tables and charts. The Likert scale was used to analyze the mean score and standard deviation, this helped in determining the extent to which the bank faced different challenges in its IT alignment to business strategy. The researcher determined the reliability or internal consistency of each variable by calculating the Cronbach alpha coefficient.

According to Venkatraman (1993), IT alignment is measured by determining the absolute difference between the rating for business and IT strategies on the following items:

understanding of business and IT objectives; participation in business and IT planning; content of IT and business plans; and revision of business/IT plans when changes take place. For instance, two questions were set to measure the content of the business and IT plans. The first one determined if the business plan specified the contribution of IT to business and the corresponding question determined whether the IT plan addressed business priorities. The difference in ratings on these items was then calculated. If this difference were low, this would indicate a higher level of IT alignment. Data analysis was use the Statistical Package for Social Sciences (SPSS) software. Tables were used to summarize responses for further analysis and facilitate comparison. This generated quantitative reports through tabulations, percentages, and measure of central tendency.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter entails the findings of the study based on the data collected from the field. The Analysis focused on the objectives of the study which sought to investigate the current practice on how IT Manager/CIO's align IT-strategy in Kenyan banks, examine how well they had achieved the alignment and further establish any challenges encountered given the complexity of IT strategy alignment in the Kenyan banking sector. A sample size of 45 commercial banks was used and 32 successfully responded. The data was analyzed using Statistical Package for social sciences (SPSS) and the information was presented in form of pie charts, bar graphs and tables.

4.2 Response rate

This section sought to show the actual number of respondents who responded in the study against the targeted sample size. The findings are shown in table 4.1 below.

Table 4.1 Response rate

	Frequency	Percentage
Non-respondents	11	28.8
Actual response	32	71.1
Target population	45	100

The study targeted 45 respondents from the commercial banks who were a representation of 100% of the total sample size. However, the study managed to successfully collect data from 32 respondents who represented 71.1% of the total sample size. This sample size was reliable to meet the objectives of the study. Only 28.8% of the respondents did not respond.

4.3 Demographic information

In order to capture the general information of the respondents under study issues such designation of the respondents was addressed in the first section of the questionnaire. This was important because it enhanced reliability and gave the basic understanding of the respondents.

4.3.1 Designation of the respondents

The study sought to show the designation of those in the IT department in the various commercial banks under study. Figure 4.1 shows the responses.

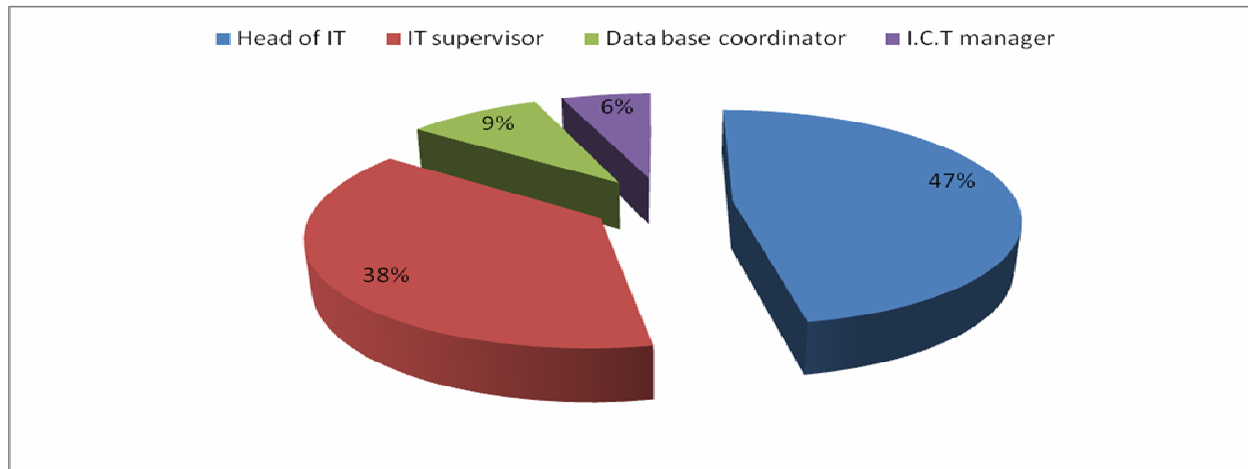


Figure 4.1: Designation of the respondents

Source: Research questionnaire

The study shows that 47% of the respondents were heads of IT while 38% were IT supervisors. Nine percent of the respondents were data base coordinators while 6% were ICT managers.

4.4 Importance of benefits of information technology (IT) to your organization

This was to determine the importance of the benefits of information technology (IT) in their organization. A scale of 1-5 was used. The scores “Most important” and “Important” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale ($1 \leq \text{Important} \leq 2.5$). The scores of ‘Moderate Extent’ were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 \leq \text{Moderate Extent} \leq 3.5$). The score of “Less Important” and “Not at all” represented less important benefits of information benefits in the organization. This was equivalent to 3.6 to 5.0 on the Likert Scale ($3.6 \leq \text{Less Important} \leq 5.0$).

Table 4.2 Importance of benefits of information technology (IT) to the organization

	Mean	Std deviation	Rank
Faster decision making	2.16	.958	1
Growth in revenue	2.42	.961	2
Competitive advantage	2.42	.961	3
Improved performance	2.50	1.000	4
Corporate reputation	3.50	1.100	5
Employee retention and satisfaction	4.28	.826	6
Innovation and creativity	4.30	.923	7
Aggregate Mean	3.08	0.954	

Source: Research questionnaire

From the table above, Most of the IT managers indicated that improved performance was the most important benefit of information technology in their organization; this was represented by a mean score of 2.50. On the other hand competitive advantage and growth in revenue were considered as important benefits of information technology, they were represented by a mean score of 2.42 respectively. Further the respondents stated that faster decision making was an important benefit of information technology and was represented by a mean score of 2.16. In addition the respondents were moderate on corporate reputation as a benefit of information technology in their organization; this was represented by a mean score of 3.50. Employee retention and satisfaction and innovation and creativity were considered as less important benefits of information technology in the organization, they were represented by a mean score of 4.28 and 4.30 respectively.

The aggregate mean of importance of benefits of information technology (IT) to the organization was 3.08 on the continuous likert scale. This shows that the benefits of IT were important to a moderate extent.

4.5 Research Objective 1: Current practices of how IT manager/CIO align IT-business strategy in Kenya

This was to determine current practices of how IT manager/CIO align IT-business strategy in Kenya. A scale of 1-5 was used. The scores “Very Great Extent” and “Great Extent” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale ($1 \leq \text{Great Extent} \leq 2.5$). The scores of ‘Moderate Extent’ were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 \leq \text{Moderate Extent} \leq 3.5$). The score of “Low Extent” and “No Extent” represented to a low extent current practices of how IT manager/CIO align IT-business strategy. This was equivalent to 3.6 to 5.0 on the Likert Scale ($3.6 \leq \text{Low Extent} \leq 5.0$).

Table 4.3 Current practices of How IT manager/CIO align IT-business strategy in Kenya

	Mean	Std deviation	Rank
IT contribute to overall business plan in your firm	2.11	1.410	1
Understand the business and IT objectives	2.42	.961	2
Participate in business and IT planning in your organization	2.50	1.000	3
Firm streamlined its most critical business and IT processes to support its overall business strategy	3.00	.973	4
Firm aligned its IT operational plans with overall business strategy	3.75	1.251	5
Understand the context of the business plans developed in your organization	4.23	.921	6
Aggregate mean	3.00	1.086	

Source: Research questionnaire

Table 4.2 above reveals that most of the IT managers indicated that they understood the business and IT objectives of their organization to a great extent and this was represented by a mean score of 2.42. The respondents indicated that they participated in business and IT planning of their organization to a great extent; this was represented with a mean score of 2.50. On the other hand the respondents revealed that IT contributed to overall business plans in their firms to a great extent; this was represented with a mean score of 2.11. Further, the respondents were

moderate that the firm's streamlined their most critical business and IT processes to support its overall business strategy; this was shown with a mean score of 3.00. In addition, the respondents indicated that the firms had aligned its IT operational plans with the overall business strategy to a low extent as shown by a mean score of 3.75. Moreover, the respondents indicated that they understood the context of the business plans developed in their organization to a low extent, this was represented by a mean score of 4.2258.

The aggregate mean score of the Current practices by IT managers in alignment of IT-business strategy was 3.00 on the continuous likert scale. This means that the IT manager and the CIO adopted the practices to a moderate extent.

4.6 Research Objective 2: Alignment of IT to business objectives in their organization in user orientation, Business contribution, Operational excellence and future orientation.

The study sought to show the extent to which organizations achieved alignment of IT to business objectives, that is, in user orientation, Business contribution, Operational excellence and future orientation. Business contribution and operational excellence were the major measurements of the extent to which organizations had achieved IT alignment.

4.6.1 Business Contribution of IT and Operational Excellence

Venkatraman (1993) put forward a framework for continuous strategic alignment composing of two components, namely analytical component (strategic alignment) and administrative component (achieving alignment) hence this section sought to determine alignment of IT to business objectives in commercial banks in Kenya in regard to Business Contribution and Operational Excellence. A scale of 1-5 was used. The scores "Very Great Extent" and "Great Extent" were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale ($1 \leq \text{Great Extent} \leq 2.5$). The scores of 'Moderate Extent' were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 \leq \text{Moderate Extent} \leq 3.5$). The score of "Low Extent" and "No Extent" represented to a low extent alignment of IT to business objectives in their organization in business Contribution. This was equivalent to 3.6 to 5.0 on the Likert Scale ($3.6 \leq \text{Low Extent} \leq 5.0$).

Table 4.4 Business Contribution of IT and Operational Excellence

Business Contribution of IT	Mean	Std deviation	Rank
Business value for existing ,new or planned IT projects	2.11	1.410	1
Management perceive IT department	2.16	.958	2
Adoption of IT expose the company to new business capabilities	2.42	.961	3
Adoption of IT contributed to business objectives of your organization	2.50	1.000	4
Aggregate Mean	2.30	1.082	
Operational excellence	Mean	Std deviation	Rank
IT processes in place effective and efficient	2.16	.958	1
Information provided by IT accurate and reliable	2.42	.961	2
IT resources available throughout the period requested for by the users i.e. peak time availability and critical process uptime	2.50	1.000	3
Aggregate Mean	2.36	0.973	

Source: Research questionnaire

The study shows that the aggregate mean of alignment of IT to business contribution was 2.30 on the likert scale. This shows that the IT managers had achieved alignment of IT to business contribution to a great extent. This could have been attributed to the fact that majority of the organizations had achieved business value for existing, new or planned IT projects to a great extent due to IT alignment; this was represented with a mean score of 2.11 on the likert scale. The respondents also indicated that the Adoption of IT had exposed their companies to new business capabilities; this was represented with a mean score of 2.42.

The aggregate mean for Operational excellence was 2.36; this means that the IT managers had achieved alignment of IT to operation excellence to a great extent. From the study, majority of

the respondents indicated to great extent that IT processes in place were effective and efficient and that information provided by IT was accurate and reliable; this was represented with a mean score of 2.16 and 2.42 respectively on the likert scale; hence the operational efficiency. The aggregate mean score of business contribution was 2.30 while that one of operational excellence was 2.36; this shows that they are were closely related. These are the major determinants of the success of alignment of IT to business objectives and according to the study IT alignment had achieved both business contribution and operational excellence to a great extent.

Table 4.5 below sought to show the extent of alignment given the overall IT contribution to business plan and Firms alignment of its IT operational plans with the overall business strategy.

Table 4.5 Extent of alignment among banks

Bank category	IT contribute to overall business plan	Firm aligned its IT operational plans with the overall business strategy	Difference
1 tier	2.36	2.30	0.06
2 nd tier	2.48	2.36	0.12
3 rd tier	2.50	2.34	0.16
Aggregate	2.45	2.33	0.12

Table 4.5 shows the extent to which commercial banks in Kenya had aligned IT operational plans with the overall business strategy. Tier 1 and 2 shows that the organizations aligned their IT to business contribution at a great extent; this was represented by a mean score of 2.30, on a scale of 1-5 on the likert scale. The tiers were arrived at based on the Central Bank of Kenya (CBK) categorization of Kenyan banks based on gross assets (loans).

The aggregate mean of IT contribution to overall business plan was 2.45. On the other hand, the aggregate mean of IT operational plans with the overall business strategy was 2.33; this

means that commercial banks in Kenya had were aligned to great extent in regard to business contribution and operation excellence. Tier one included the banks that have over kshs. 15 Billion gross assets; the difference between IT contribution to overall business plan and firm aligned its IT operational plans with the overall business strategy was 0.06 meaning that the banks were highly aligned as compared to other small banks in tier 2 and tier 3.

4.6.2 User orientation

This was to determine alignment of IT to business objectives in their organization in user orientation. A scale of 1-5 was used. The scores “Very Great Extent” and “Great Extent” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale ($1 \leq \text{Great Extent} \leq 2.5$). The scores of ‘Moderate Extent’ were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 \leq \text{Moderate Extent} \leq 3.5$). The score of “Low Extent” and “No Extent” represented to a low extent alignment of IT to business objectives in their organization in user orientation. This was equivalent to 3.6 to 5.0 on the Likert Scale ($3.6 \leq \text{Low Extent} \leq 5.0$).

Table 4.6 User orientation,

	Mean	Std deviation	Rank
Users perceive IT department	2.42	.961	1
Users have challenge in using IT to get solutions often	2.68	1.336	2
Organization have a backlog of pending IT queries	3.00	.973	3
IT adequately interfaced with both internal and external users	3.50	.946	4
IT meet user expectations	3.75	1.251	5
Aggregate Mean	3.07	1.0934	

Source: Research questionnaire

The aggregate mean of IT alignment to user orientation was 3.07; this means that commercial banks in Kenya had aligned IT to user orientation to a moderate extent.

The study shows that users perceived IT department as a contributor to the alignment of IT to business objectives and that the user had challenges in using it to get solutions often to a moderate extent, this was represented by a mean score of 2.42 and 2.68 respectively. On the

other hand the respondents indicated that the organization had a block log of pending queries to a moderate extent as shown by a mean score of 3.00. In addition, the study shows that IT adequately interfaced with both internal and external users to a moderate extent as shown with a mean score of 3.50 on the continuous likert scale.

4.6.3 Future orientation

This was to determine alignment of IT to business objectives in their organization in future orientation. A scale of 1-5 was used. The scores “Very Great Extent” and “Great Extent” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale ($1 \leq \text{Great Extent} \leq 2.5$). The scores of ‘Moderate Extent’ were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 \leq \text{Moderate Extent} \leq 3.5$). The score of “Low Extent” and “No Extent” represented to a low extent alignment of IT to business objectives in their organization in future orientation. This was equivalent to 3.6 to 5.0 on the Likert Scale ($3.6 \leq \text{Low Extent} \leq 5.0$).

Table 4.7 Future orientation

	Mean	Std deviation	Rank
IT help address customers needs collected via research and development in your organization	2.50	1.000	4
IT will enable your organization to meet future needs	2.42	.961	3
Need for training of IT staff to help your company take up future existing opportunities via IT channel	2.16	.958	2
IT experience challenges in human resources such as high staff turnover, difficulties in attracting talent. etc	2.11	1.410	1
Aggregate Mean	2.30	1.082	

Source: Research questionnaire

Most of the IT managers revealed that IT would help address customers need via research and development in their organization to a great extent which was in alignment to business objectives; this was represented by a mean score of 2.50. Further, the respondents indicated that IT would enable their organization meet future needs to a great extent; this was represented with

a mean score of 2.42 on the likert scale. On the other hand, the respondents agreed to a great extent that there was need for training of IT staff to help the company take up future existing opportunities via IT channel as shown with a mean score of 2.16. In addition, the study found out that IT experienced challenges in human resources such as staff turnover, difficulties in attracting talent to a great extent; as shown with a mean score of 2.11 on the likert scale.

The aggregate mean of the achievement of IT alignment to future orientation was 2.30 on the scale; this shows that the alignments addressed on future orientation to a great extent.

4.7 Research Objective 3: Challenges to IT and business strategy alignment in the organization

This was to determine challenges to IT and business strategy alignment in the organization. A scale of 1-5 was used. The scores “Very Great Extent” and “Great Extent” were represented by mean score, equivalent to 1 to 2.5 on the continuous Likert scale ($1 \leq \text{Great Extent} \leq 2.5$). The scores of ‘Moderate Extent’ were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 \leq \text{Moderate Extent} \leq 3.5$). The score of “Low Extent” and “No Extent” represented to a low extent challenges to IT and business strategy alignment in the organization. This was equivalent to 3.6 to 5.0 on the Likert Scale ($3.6 \leq \text{Low Extent} \leq 5.0$)

Table 4.8 Extent to which the following factors act as challenges to IT and business strategy alignment in the organization.

	Mean	Std deviation	Rank
Lack of business strategy or knowledge of its existence	2.11	1.410	1
Business Vs IT mentality	2.16	.958	2
Rapid rate of technological change	2.42	.961	3
Your organization has not aligned operational plans with overall corporate strategy	2.50	1.000	4
Challenge in streamlining the most critical business processes to support implementation of corporate strategy	2.68	1.336	5
Lack of awareness of the need for alignment of IT to business strategy	3.00	.973	6
Lack of goodwill from senior management	3.50	.946	7
There is a no clearly articulated business case that supports your organization 's strategy	3.50	.946	8
Difficulty in communicating and understanding IT	3.75	1.251	9
Organizational structural barriers	4.05	.970	10
Lack of industry and business knowledge	4.05	.970	11
Inability to identify your organization 's core competence (what gives you competitive advantage over other banks	4.28	.826	12
Issues of performance expectations for critical jobs are aligned to the organization's strategy	4.58	.607	13
Aggregate	3.28	1.012	

Source: Research questionnaire

Table 4.7 above shows that most of the IT managers indicated to great extent that there was a challenge in streamlining the most critical business processes to support implementation of corporate strategy; this was represented by a mean score of 2.68. Further, the respondents indicated that their organization had not aligned operational plans with overall corporate strategy to a great extent; this was presents with a mean score of 2.50. On the other hand, majority of the respondents revealed that rapid rate technological change acted as a challenge to IT and business strategy alignment in the organization to a great extent as shown with a mean score of 2.42. The respondents further indicated to a great extent that business Vs IT mentality posed as challenge to IT and business strategy alignment; this was represented by a mean score of 2.16.

However, the respondents revealed that lack of business strategy and knowledge of its existence posed as a challenge to IT and business strategy alignment in the organization to a moderate extent as shown with a mean score of 3.0 on the likert scale. On the other hand, the respondents revealed that lack of goodwill from the senior management and lack of a clearly articulated business case that supports their organization strategy acted as challenges to IT and business strategy alignment in the organization to a moderate extent; this was represented with a mean score of 3.50.

The aggregate mean score of challenges to IT and business strategy alignment in the Kenyan commercial banks was 3.28; meaning that there were challenges in the organizations which affected the alignment of IT to business strategy to a moderate extent.

4.8 Discussion

The objectives of the study were to investigate current practice on how IT Manager/CIO's align IT-strategy in Kenyan banks, examine how well they had achieved the alignment and further establish any challenges encountered given the complexity of IT strategy alignment as a goal.

Majority of the respondents indicated that they understood the business and IT objectives of their organization, participated in business and IT planning and further revealed that IT contributed to overall business plans in their firms to a great extent. According to Hall and Liedtka (2007), IT can facilitate better information flows for internal communication (up, down, and sideways in the organization), and more complex software knowledge management systems allow better information flow about market information, accelerate anticipating client needs, help feed product development, and speed information flow back to decision makers. Users perceived IT department as a contributor to the alignment of IT to business objectives to a great extent.

The aggregate mean of alignment of IT to business contribution was 2.30 on the likert scale. This shows that the IT managers had achieved alignment of IT to business contribution to a great extent. An earlier study by Mankin, Cohen and Bikson (1996) revealed that the business and technology sides are complementary and co-dependent of each other. Hence, firms would need to view information systems as strategic-level assets rather than as just administrative support. Adoption of IT alignment had exposed the organizations to new business capabilities.

Further, the study showed that the aggregate mean of importance of benefits of information technology (IT) to the organization was 3.08 on the continuous likert scale. This shows that the benefits of IT were important to a moderate extent. Gordon (2000) considered the nature of the interactions between business and IT units to be an important element of a company's competitive success and is a key determinant of success or failure. Moreover Ciborra (1997) argued that the dominating and rational top-down planning approaches to strategic alignment within IT do not reflect the practices that can be observed in actual organizations and management behavior.

On the other hand the aggregate mean for Operational excellence was 2.36 while that one for business contribution was 2.30; this means that the IT managers had achieved alignment of IT to operation excellence and business contribution to a great extent. The study found out that the IT processes put in place were effective and efficient and information provided by IT was accurate and reliable. According to Venkatraman (1993) alignment of business and IT strategy is believed to improve organizational performance however top management must incorporate a degree of high level planning, because developments and the building of infrastructure cannot be carried out in a random manner with bottom-up disjointed developments. Parties need to formulate coherent priorities for business decisions and their subsequent technical implication so that organizations can overcome the challenges such as the rapid rate of technological change and the challenge of streamlining the most critical business processes to support implementation of corporate strategy which were found to affect the business to a great extent.

The study also found out that the alignment of IT objectives to user orientation was to a moderate extent with an aggregate mean score of 3.07. Majority of the respondents revealed that IT meets user expectations to a moderate extent. According to Hall and Liedtka, (2007), changes such as rapid growth in client numbers and in product diversity or new business models and strategies will all alter the nature of information flows and supporting technologies needed. The aggregate mean of the achievement of IT alignment to future orientation was 2.30 on the scale; this shows that the alignments addressed on future orientation to a great extent. The study shows that I.T alignment had enabled organizations future needs and it also addressed customer needs. This is also in line with the study by Ventraman (1993) who acknowledged that alignment is of a

dynamic nature and will always need to evolve in order to maintain continuity. It was also revealed that a more strategic role within organizations can be achieved when IT forms a connection with strategic management and this alignment is achieved through mechanisms including governance processes; value management; human resources capabilities and technological capabilities.

The tiers were categorised in form of gross asset that is those banks with over kshs. 15 Billion gross assets (tier 1), Between kshs 5 Billion and kshs. 15 Billion gross assets (tier 2) and those banks with gross asset of below kshs 5 Billion (tier 3). The study shows that Kenyan banks in tier one had aligned IT to business contribution and operational excellence to a great extent as compared to banks in tier 2 and 3. The organizations also had achieved alignment in future orientation; however the study found out that the banks achieved IT alignment to a moderate extent.

Large banks are better aligned because they heavily rely on IT in their critical operations in order to improve on their operational excellence and efficiency. However, Ciborra nullifies and denies the existence of IT alignment; he revealed that alignment is modeled as a bridge between business strategy and IT infrastructure, and he claims that this is an attempt to bridge two extremely unstable variables. To him, this is bound to fail, since strategy ends up in “tinkering” or “bricolage” and the IT-infrastructure tends to “drift”. Ciborra continues to argue out that there is no observable alignment, nor measurable fit, because strategy now is de facto bricolage, while the technology is mostly “out of control. This is contrary to our study whereby it was observed that there was alignment of IT to a great extent in the banks in tier 1 and moderate alignment in banks in tier 2 and tier 3.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section of the research provides a summary of the findings, the conclusion of the study and the recommendations on challenges of IT alignment to business strategy.

5.2 Summary

The purpose of the study was to identify the challenges of IT alignment to business strategy. The study was guided by the following research objectives to help achieve the purpose of the study;

- i. To investigate current practice- how IT Manager/CIO's align IT-strategy in Kenyan banks
- ii. To examine how well they achieve it i.e. the outcome
- iii. To establish any challenges encountered given the complexity of IT –strategy alignment as a goal.

The study shows that majority of the respondents understood the business and IT objectives of their organization to a great extent. They also revealed that they participated in business and IT planning of their organization to a great extent. Further, majority of the respondents revealed that IT contributed to overall business plans in their firms to a great extent. However, the study found out that the IT personnel understanding of the context of the business plans developed in their organization was to a moderate extent. The respondents also revealed that their firm had streamlined its most critical business and IT processes to support its overall business strategy to a moderate extent. On the other hand, most of the respondents indicated that the firm had aligned its IT operational plans with the overall business strategy to a low extent.

The study also shows that the IT managers had achieved alignment of IT to business contribution to a great extent. Majority of the respondents indicated that the management perceived IT department as a contributor to achieving alignment of IT to business objectives to a

great extent. They also revealed that the adoption of IT contributed to business objectives of their organization to a great extent. On the other hand, majority of the managers indicated that adoption of IT had exposed their companies to new business capabilities to very great extent. In addition they revealed that there was business value for existing, new or planned IT projects to a great extent. The study also found out that IT managers had achieved alignment of IT to operation excellence to a great extent this could be attributed to the fact that IT processes in place were effective and efficient to a great extent as revealed by majority of the respondents while on the other hand majority agreed to a great extent that the IT resources in their companies were available throughout the period as requested for by the user i.e. peak time availability and critical process uptime. Moreover, majority of the respondents revealed that the information provided by IT was accurate and reliable to a great extent.

On the challenges encountered in the IT alignment; majority of the respondents indicated to a great extent that the organizations lacked business strategies or knowledge of their existence and that rapid change of technological change posed as a challenge to IT and business strategy alignment in the organization. On the other hand, majority of the respondents revealed that issues of performance expectations for critical jobs were aligned to the organization's strategy to a moderate extent. Lack of awareness of the need for alignment of IT to business strategy posed as a challenge to IT and business strategy alignment in the organization to a moderate extent. Moreover most respondents were moderate that there was a challenge in streamlining the most critical business processes to support implementation of corporate. However, inability to identify the organization's core competence (what gives them a competitive advantage over other banks) acted as a challenge to IT and business strategy alignment in the organization to a low extent according to majority of the respondents while lack of industry and business knowledge posed as a challenge to IT and business strategy alignment in the organization only to a low extent.

The overall, the study found out that the study shows that IT alignment in the Kenya Commercial banks had achieved business contribution and operational excellence to a great extent.

5.3 Conclusions

The purpose of the study was to investigate the challenges of IT alignment to business strategy. The following conclusions were made based on the summary of the findings:

Alignment of IT to business objectives is claimed to benefit organizations. These benefits would include gaining competitive advantage above the competitors, improved performance, faster decision making, growth in revenue and innovation and creativity. Henderson and Venkatraman (1993) revealed that inability to realize value from IT investment is, in part, due to the lack of alignment between the business and IT strategies of the organization. However, Ciborra (1997) argued that the dominating and rational top-down planning approaches to strategic alignment within IT do not reflect the practices that can be observed in actual organizations and management behavior. He also claims that alignment models are theoretical abstractions that only exist in an “objective” world. Ciborra argument is also against this study which shows that there were observable changes in the banks such as improved performance, faster decision making, growth in revenue and innovation and creativity due to IT alignment in the organizations.

The study also established that IT Manager/CIO’s understood the business and IT objectives of their organization and hence they participated in business and IT planning of their organization. They were aware that IT contributed to a great extent to overall business plans in their firms. However, the IT personnel did not fully understand the context of the business plans developed in their organization. This could also be the reason why the firms had not fully streamlined their most critical business and IT processes to support its overall business strategy as well as aligning its IT operational plans with the overall business strategy. Alignment of IT to business objectives also improved operational excellence such that the processes in place were effective and efficient and ensured that IT resources in the organizations were available throughout the period as requested for by the user. It also guaranteed that the information provided by IT was accurate and reliable. This is however in contrast with Ciborra (1997) who argued that the dominating and rational top-down planning approaches to strategic alignment within IT do not reflect the practices that can be observed in actual organizations and management behavior. However, in our study it was established that there were reflection of

change of practices for example, the IT Manager/CIO's participated in business and IT planning and also contributed to a great extent to overall business plans in their firms because of the IT alignment strategies in the organization.

Alignment is almost a must for banks; this is mostly because they deal with finance which is easily digitized.

Some of the challenges facing the companies are in human resources such as high staff turnover, difficulties in attracting talented. Organizations also lacked business strategies or knowledge of their existence amid being affected by the rapid change of technological change. There was also lack of awareness of the need for alignment of IT to business strategy. Other challenges established were business Vs IT mentality and the fact that most organizations had not aligned their operational plans with overall corporate strategy.

The study established that Kenya Commercial banks had adopted IT strategy alignment to their business and it was revealed that managers in this bank had achieved IT alignment in business contribution and operational excellence though the were challenges such as lack of business strategy or knowledge of its existence and rapid rate of technological change that affected the IT alignment processes in the banks. There has been observable technological change in the operations of the Kenyan commercial banks and especially the modern move towards mobile banking (M-Banking).

5.4 Recommendation

IT organizations seeking to improve their strategic alignment and performances should consider the following: Understand business strategy- if executives do not articulate the business strategy clearly or IT is not actively integrated into the business; it is unlikely IT leadership will understand or be able to align with the strategy. Establish organizational objectives- when an IT organization focuses on adding business value without establish or confirming its alignment model and objectives, it risks becoming fragmented as it attempts to move in multiple, counterproductive directions. Determine the best fit- IT leaders need to recognize that alignment it's not one size fit all and the practices that enable alignment with one organization, may not apply to another. Even if they are both within same industry and same size. Assess alignment- As

business objectives change; it is possible the IT alignment and model will need to be modified as well. IT and business leaders should monitor their strategic alignment continually and assess whether changes need to occur.

The top level management teams must become and remain involved in communicating, illustrating, and reinforcing the value and results of IT/business alignment, using market, product, and other information results. The executive should also lead and be involved in educating as well as working with project level teams to educate, reinforce, and reward business unit/division and group efforts and results that align and implement IT/business enterprise strategy at their level of involvement. Finally, using surveys and interview results such as this study might provide a “wake up” call and a basis for planning integration tactics for organizational teams at all levels. There is also need for IT audit engagement. It is ideal for businesses looking to accelerate or prioritize quantifiable IT organizational alignment and IT improvement process.

5.5 Suggestion for further studies

The research recommends the following areas for further studies:

1. The researcher suggests that for effective conclusive study on the challenges of IT alignment to business strategy, a replicate study be carried out in the larger population in other financial institutions. Probably a case study/in-depth approach would uncover more.
2. A structured questionnaire targeting IT or strategy development managers was used to collect data. The researcher suggests that future studies be conducted using an interview guide and involving the respondents into discussions. This would help the researcher direct the conversation toward the topics and issues on IT alignment to business strategy and remedies to the challenges faced. The sample size should also be increased to cover more management staff.

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APPENDICES

Appendix 1: Questionnaire

PART A: PERSONAL INFORMATION

1. Name (optional)
2. Designation of the respondent.....
3. Age
18-30 31-45
46-60 Over 60
4. Gender
Male Female
5. Marital status
Single Married
6. Number of years in the company?
0-4 years 5-7
7-10 Over 10
7. What's your highest academic qualification
Degrees Masters PhD

PART B SPECIFIC OBJECTIVES

8. On a scale of 1 to 5 where 1 = most important benefit and 5 = not at all indicate the importance of the benefits of information technology (IT) to your organization.

	1	2	3	4	5
a) Competitive advantage	[]	[]	[]	[]	[]
b) Improved performance	[]	[]	[]	[]	[]
c) Faster Decision making	[]	[]	[]	[]	[]
d) Corporate reputation	[]	[]	[]	[]	[]
e) Growth in revenue	[]	[]	[]	[]	[]
f) Employee retention and satisfaction	[]	[]	[]	[]	[]
g) Innovation and creativity	[]	[]	[]	[]	[]

Others-(specify)

.....
.....
.....
.....

9. The following questions are to investigate the current practices of how IT manager/CIO's align IT-business strategy in Kenya. Kindly Rate *each* criteria based on *the level of evidence* that you see. Record a rating for each in the "Ratings" Column. Use this Rating Scale. Where 1 is to a very great extent, 2 is to a great extent, 3 is to a moderate extent, 4 is to a low extent and 5 is to no extent.

	1	2	3	4	5
To what extent do you <i>understand the business</i> and IT objectives of your organization?					
To what extent do you participate in business and IT planning in your organization?					
To what extent do you understand the context of the business plans developed in the organization?					
To what extent does the IT contribute to overall business plan in your firm?					
Has your firm aligned its IT operational plans with the overall business strategy?					
Has your firm streamlined its most critical business and IT processes to support its overall business strategy?					

10. To what extent do you achieve alignment of IT to business objectives in your organization in the following areas?

	1	2	3	4	5
User orientation					
How do users perceive IT department?					
Does IT meet user expectations?					
Does your organization have a backlog of pending IT queries from users?					
Has IT adequately interfaced with both internal and external users?					
Do users have challenge in using IT to get solutions often?					
Business contribution					
How does management perceive IT department?					
Has adoption of IT contributed to business objectives of your organization? (cost savings, etc)					
Does adoption of IT expose your company to new business capabilities?					
Is there any business value for existing, new or planned IT projects?					
Operational excellence					
Are the IT processes in place effective and efficient?					
Are the IT resources available throughout the period requested for by the users? i.e. peak time availability and critical process uptime					
Is the information provided by IT accurate and reliable?					
Future orientation					
How well do you think IT will enable your organization to meet future needs?					
Will IT help address customer needs collected via research and development in your organization?					
Is there need for further training of IT staff to help your company take up future or existing opportunities via IT channel?					
Does IT experience challenges in human resources such as high staff turnover, difficulties in attracting talent, etc?					

11. To what extent do the following factors act as a challenge to IT and business strategy alignment in the organization? Where 1 is to a very great extent, 2 is to a great extent, 3 is to a moderate extent, 4 is to a low extent and 5 is to no extent.

	1	2	3	4	5
Lack of business strategy or knowledge of its existence					
Organization structural barriers					
Lack of awareness of the need for alignment of IT to business strategy					
Difficulty in communicating and understanding IT					
Lack of goodwill from senior management					
Rapid rate of technological change					
Business Vs. IT mentality					
Inability to identify your organization's core competence(what gives you competitive advantage over other banks)					
Your organization has not aligned operational plans with overall corporate strategy					
Challenge in streamlining the most critical business processes to support implementation of corporate strategy.					
There is a no clearly articulated business case that supports your organization's strategy					
Issues of performance expectations for critical jobs are aligned to the organization's strategy					
Lack of industry and business knowledge					

Thanks again for your time

Appendix 2: List of Commercial Banks

Over kshs. 15 Billion gross assets

1. Family Bank
2. Equity Bank
3. K C B
4. CFC Stanbic Bank
5. Barclays
6. Co-operative Bank
7. StanChart
8. N IC Bank

Between kshs 5 Billion and kshs. 15 Billion gross assets

1. A B C Bank
2. C B A
3. Chase Bank
4. Citibank Ltd
5. Bank of Africa Ltd
6. Diamond Trust Bank
7. Consolidated Bank
8. National Bank
9. Imperial Bank (K) Ltd
10. Prime Bank Limited
11. I&M Bank
12. Housing Finance
13. GULF Bank
14. Habib Bank AG Zurich

Below kshs 5 Billion

15. Bank of Baroda
16. Bank Of India
17. Jamii Bora Bank
18. Credit Bank Ltd
19. Development Bank
20. Dubai Bank
21. ECO Bank
22. Equatorial Bank
23. Fidelity Bank Ltd
24. Fina Bank Ltd
25. First Community Bank
26. Giro Bank Ltd
27. Guardian Bank Ltd
28. Habib Bank Ltd
29. K-Rep Bank Ltd
30. Middle East Bank
31. Oriental Bank
32. Paramount Bank
33. UAB
34. Victoria Bank