



Strategic Issues in Information Systems Planning from the Ghanaian Perspective

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ABSTRACT

The banking sector has seen considerable transformation in the 1980s starting from the United States, then Europe and now the global village. This study adopted the survey methodology. The purpose of this study was to determine the key variables in information system (IS) planning of six banks in the Greater Accra Region of Ghana. The main objective of the study is to explore the success predictors of strategic IS planning (SISP) and to investigate the staff participation in IS strategy (ISS) formulation. The cases investigated were three local banks and three foreign banks. The six banks used were named Bank A, Bank B, Bank C, Bank D, Bank E and Bank F for the sake of anonymity. With adherence to a survey research methodology, this study used the questionnaire instrument. The total number of questionnaire returned was 248 out of 410, presenting a response rate of 60.5%. The findings revealed that, the local banks concentrate on management team and information technology department for the formulation of ISS. The story is different for that of the foreign banks. For the foreign banks they solely depend on technology group for the formulation of ISS. From the findings, the local banks indicted that, the most important SISP success factors are resources, IS alignment to the business strategy and staff training and staff involvement. Whilst the foreign banks also indicated that, the most important SISP success factors are resources, organizational and technological changes and top management involvement.

Keywords: Information Systems Planning, Information Systems Strategy, Ghana

JEL Classification: M1

1. INTRODUCTION

Information and communication technology (ICT) has changed the approaches to conducting business transactions and meeting the growing demands of customers for most organizations. The promise of information system (IS) in the banking sector has been seen in terms of its potential to increase customer base, reduce transaction costs, improve the quality and timeliness of response, enhance opportunities for advertising and branding, facilitate self-service and service customization, and improve customer communication and relationship (Garau, 2002).

The banking sector has seen considerable transformation in the 1980s starting from the United States, then Europe and now the global village. The main forces behind this significant transformation in the banking industry are deregulation and innovation in information technology (IT). These forces have brought about increased competition, not only among banks, but also in other financial and non-financial industries. Over the

years, IT has contributed to the blurring differences in retail, corporate and investment banking all over the world as universal banking seems to be the most favored and preferred form of banking to specialized banking. Harold and Jeff (1995) contend that financial service providers should modify their traditional operating practices to remain viable in the 1990s and the decades that follow. They claim that the most significant shortcoming in the banking industry today is a wide spread of failure on the part of senior management in banks to grasp the importance of technology and incorporate it into their strategic plans accordingly. Woherem (2000) claimed that only banks that overhaul the whole of their payment and delivery systems and apply ICT to their operations are likely to survive and prosper in the new millennium. He advises banks to re-examine their service delivery systems in order to properly position themselves within the framework of the dictates of the dynamism of ICT. The banking industry in Ghana has witnessed tremendous changes linked with the developments in ICT over the years. The quest for survival, global relevance, maintenance of existing market share and sustainable development

has made exploitation of the many advantages of ICT through the use of automated devices imperative in the industry.

The term strategic IS (SIS) has for many become synonymous with “the strategic use of IT”. But unlike the short cycles of summer fads or the similarly brief lives of buzzwords buried soon after birth, the SIS concept now enters its second decade firmly entrenched world-wide. Yet the meaning and reference of this idea remains a bit elusive. Current approaches to designing a SIS aim to obtain top management awareness, and to identify and implement applications that may generate competitive advantage. The systematic approaches are based on two main ingredients: A set of guidelines indicating how IT can support the business *viz.* the competition and a planning and implementation strategy. The guidelines refer to specific models of competition, while planning and implementation methodologies are grounded on the understanding of how an effective business strategy should be formulated and carried out (Wiseman, 1988).

As the pace of competition is intensifying, the use of SISs as competitive weapons is increasing day by day. Today, business operations and ISs are so tightly integrated with each other that it would almost be impossible to improve business processes unless corresponding IS support the change. To support any change in the organization, information should be properly planned, developed, implemented and maintained in any organization. The designing of IS is an important phase because, if IS are not properly designed it may lead to organization’s failure.

The decreasing cost of the technology and the power of imitation may quickly curtail any competitive advantage acquired through a SIS. On the other hand, the iron law of market competition prescribes that those who do not imitate superior solutions are driven out of business. This means that any successful SIS becomes a competitive necessity for every player in the industry. Tapping standard models of strategy analysis and data sources for industry analysis will lead to similar systems and enhance, rather than decrease imitation. How then should “true” SIS be developed? It is not surprising, by the way, that business organizations should ask themselves:

- Is SIS offering true competitive advantage, or do they just represent a competitive necessity?
- How can one implement systems that cannot be easily copied, thus generating returns over a reasonable period of time?

ISs strategy (ISS) is concerned mainly with aligning IS development with business needs and with trying to gain a strategic advantage through the proper using of IT in the firm. It is a planning process for the development of systems towards some future vision of the role of ISs in the organization. ISS defines the organization’s demand for IS/IT – the requirements or “demand” for information and systems to support the overall business strategy. It brings together the business aims of the organization, a clear understanding of the information needed to support those aims, and the implementation of computer systems to provide that information. ISS is firmly grounded in the business, taking into consideration both the competitive impact and alignment requirements of IS/IT. Basically, IS strategy defines

and prioritizes the investments required to achieve the “ideal” application portfolio, the nature of the benefits expected and the changes required to deliver those benefits, within the constraints of resources and systems interdependencies (Ward and Peppard, 2002).

2. LITERATURE REVIEW

2.1. The Strategic Planning Process

In today’s highly competitive business environment, budget-oriented planning or forecast-based planning methods are insufficient for a large corporation to survive and prosper. The firm must engage in strategic planning that clearly defines objectives and assesses both the internal and external situation to formulate strategy, implement the strategy, evaluate the progress, and make adjustments as necessary to stay on track. A simplified view of the strategic planning process is shown in Figure 1.

2.2. Mission and Objectives

The mission statement describes the company’s business vision, including the unchanging values and purpose of the firm and forward-looking visionary goals that guide the pursuit of future opportunities. Guided by the business vision, the firm’s leaders can define measurable financial and strategic objectives. Financial objectives involve measures such as sales targets and earnings growth. Strategic objectives are related to the firm’s business position, and may include measures such as market share and reputation.

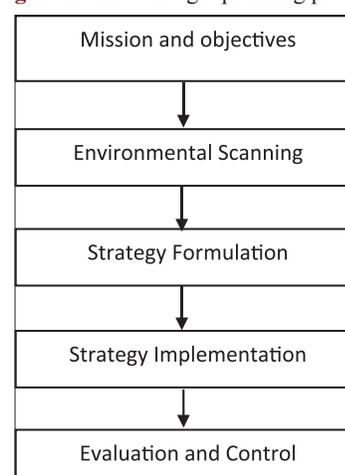
2.3. Environmental Scanning

The environmental scan includes the following components:

- Internal analysis of the firm
- Analysis of the firm’s industry (task environment)
- External macro environment (political, economic socio-cultural, technological analysis).

The internal analysis can identify the firm’s strengths and weaknesses and the external analysis reveals opportunities and threats. A profile of the strengths, weaknesses, opportunities,

Figure 1: The strategic planning process



Source: Simplified strategic planning

and threats is generated by means of a strengths, weaknesses opportunities, threat analysis. An industry analysis can be performed using a framework developed by Michael Porter known as Porter's five forces. This framework evaluates entry barriers, suppliers, customers, substitute products, and industry rivalry.

Environmental analysis (scanning or appraisal) is very important to modern organization. It is used by corporate planners to monitor the economic factors, competition, government legislation, suppliers, technology and market setting to determine the opportunities for and threats to the enterprise. Organizations scan the environment in order to understand external forces of change so that they may develop effective responses which secure or improve their position in the future. The importance of environmental analysis lies in its usefulness for evaluating the present strategy, setting strategic objectives, and formulating future strategies. The banking industry is a very strategic catalyst for the overall economic growth in any country. In Nigeria, the industry is generally regarded as an engine room for economic growth and development because of the crucial role it plays in linking all segments of the economy in the main stream (Ugboaja, 2002). The fortunes of business enterprise are known to have been determined by changes in the social, economic, political, technological, business and industrial conditions. It is therefore pertinent that a thorough and careful analysis be carried out on these factors.

The general problem of environmental scanning faced in the industry however, could anchor on total ignorance of environmental characteristics which affect them or inadequacy of information for management to plan, implement and control certain events within and outside the organization's environment. A number of studies have been conducted on the subject of environmental scanning and corporate performance. Miller (1994) carried out analysis on 81 detailed case studies of successful and failing businesses. The study found that environmental scanning was by far the most important factor in separating the successful companies from the unsuccessful, that this, it accounted for more than half of the observed variance. Environment creates both problems and opportunities for organization. Organization depends on the environment for scarce and valued resources, and organization must cope with unstable and unpredictable external and internal events. The environment itself perhaps, more than any other factor, affected organizational structure, internal processes and managerial decision making. From an information processing perspective, the environment is important because it creates uncertainty for managers. Environmental uncertainty increases information processing within organization because managers must identify opportunities, detect threats, interpret problem areas and implement strategic or structural adaptation.

Before an organization can begin strategy formulation it must scan its environmental for strengths and weaknesses. Strategic managers view environmental scanning as a prerequisite for formulating effective business strategies (Beal, 2000). Environmental scanning includes both looking at information (viewing) and looking for information (Benczur, 2005). Strategic managers are challenged to anticipate changes in the environment and be flexible enough to adjust strategies to creatively seek out new opportunities.

The process of environmental scanning creates the opportunity to weave together the past, present, and future change (Mason, 2001). A corporation uses this tool to avoid strategic surprise and to ensure its long-term health. It is against this background that, researchers believe that there is a positive relationship between environmental scanning and corporate performance. Wheelen and Hunger (2006), defined environmental scanning as the evaluation, monitoring, and dissemination of information from the external and internal environments to key people within the corporation. The term environmental analysis refers to the process of picking up signals from the larger environment, analyzing their significance for the organization and tracking the most relevant of these signals. Environmental analysis also referred to an organized activity of the group responsible for strategy, which improves a firm's competitiveness by gathering, processing and internally diffusing information, in order to rule the environment. Choo (2001) defines environment scanning as the acquisition and use of information about events, trends, and relationships in an organization's external environment, the knowledge which would assist management in planning the organization's future course of action.

Every business organization operates in an environment that transcends its official boundaries. Organization's environment can be defined as all the forces and conditions within and outside the organization that affect the organization in its day-to-day activities. Meanwhile the environment of business is a highly dynamic, complex, and competitive one. The forces a business is to contend with are varied as they are continually changing. Thus managers must take into account the influence of the environmental forces that can affect the performance of their organizations. They must have sufficient knowledge to be able to identify, evaluate and cope with environmental forces that may affect the operations of their organizations. A thorough understanding and analysis of the business environment by managers will enable the business to cope with the changing forces within the environment. To adequately understand organizational environments, one must borrow some concepts from system theory. One of the basic assumptions of system theory is that organizations are neither self sufficient nor self contained. Rather, they exchange resources with and are depended upon the external environment, which is defined as all elements outside an organization that are relevant to the physical operations (some of these element connect the organization to the physical world) (Stoner et al., 2004). Organizations take "input," that is raw materials, money, labor and energy from the external environment, transform them into products and/or services and then send them back as 'output' to the external environment. The external environment has both direct-action and indirection-action elements, also called shareholder including shareholders union, suppliers and many others who directly influence an organization. Indirect action elements; such as the technology, economy, and politics of a society, affects the climate in which an organization operates and have the potential to become direct element.

2.4. Strategy Formulation

Given the information from the environmental scan, the firm should match its strengths to the opportunities that it has identified, while addressing its weaknesses and external threats. To attain superior profitability, the firm seeks to develop a competitive

advantage over its rivals. A competitive advantage can be based on cost or differentiation. Michael Porter identified three industry-independent generic strategies from which the firm can choose, namely: Cost leadership, differentiation and focus strategies.

2.5. Strategy Implementation

The selected strategy is implemented by means of programs, budgets, and procedures. Implementation involves organization of the firm's resources and motivation of the staff to achieve objectives. The way in which the strategy is implemented can have a significant impact on whether it will be successful or not. In a large company, those who implement the strategy are likely to be different people from those who formulated it. For this reason, care must be taken to communicate the strategy and the reasoning behind it. Otherwise, the implementation might not succeed if the strategy is misunderstood or if lower-level managers resist its implementation because they do not understand why the particular strategy was selected.

2.6. Evaluation and Control

The implementation of the strategy must be monitored and adjustments made as needed.

Evaluation and control consist of the following steps:

1. Define parameters to be measured
2. Define target values for those parameters
3. Perform measurements
4. Compare measured results to the pre-defined standard
5. Make necessary changes.

2.7. ISS

The literature on ISS is extensive, much of it anecdotal in character, or exhorting managers or chief executives to make more use of IT. The function of an ISS itself is best described by Wilson (1999) who states that: "An ISS brings together the business aims of the company, an understanding of the information needed to support those aims, and the implementation of computer systems to provide that information. It is a plan for the development of systems towards some future vision of the role of ISs in the organization." An ISS is something which is essentially a planning process in the minds of the decision makers, users and developers of the systems. It is supported with written reports and plans, but they are of secondary importance.

The ISS is concerned mainly with aligning IS development with business needs and with trying to gain a strategic advantage through the proper using of IT in the firm. It is a planning process for the development of systems towards some future vision of the role of ISs in the organization. ISS defines the organization's demand for IS/IT – the requirements or "demand" for information and systems to support the overall business strategy. It brings together the business aims of the organization, a clear understanding of the information needed to support those aims, and the implementation of computer systems to provide that information. ISS is firmly grounded in the business, taking into consideration both the competitive impact and alignment requirements of IS/IT. Basically, ISS defines and prioritizes the investments required to achieve the "ideal" application portfolio, the nature of the benefits expected

and the changes required to deliver those benefits, within the constraints of resources and systems interdependencies (Ward and Peppard, 2002).

ISS is of central importance to IS practice and research. Chen et al. (2010) in their extensive review of the literature suggest that the concept of ISS is a term that is used readily. However, it is also a term that is not fully understood. In their study, they follow a perspective paradigm based on the strategic management literature to define ISS as an organizational perspective on the investment in, deployment, use, and management of IS. Through a systematic literature search, they identified the following three conceptions of ISS employed implicitly in 48 articles published in leading IS journals that focus on the construct of ISS:

1. ISS as the use of IS to support business strategy;
2. ISS as the master plan of the IS function; and
3. ISS as the shared view of the IS role within the organization.

They find that the third conception best fits the ISS. As such, they consequently propose to operationalize ISS as the degree to which the organization has a shared perspective to seek innovation through IS. Specifically, they proposed ISS typology and suggest that an organization's ISS falls into one of the two defined categories (i.e., IS innovator or IS conservative) or is simply undefined. They also developed measures for this new typology. They argue that the proposed instrument, which was cross validated across both chief information officers and senior business executives, has the potential to serve as a diagnostic tool through which the organization can directly assess its ISS. They contend that their reconceptualization and operationalization of ISS provides theoretical and practical implications that advance the current level of understanding of ISS from extant studies within three predominant literature streams: Strategic IS planning (SISP), IS/business strategic alignment, and competitive use of IS.

Salmela and Spil (2002) indicate that early attempts to formulate ISS concentrated on the analytical task of deriving ISS from business plans. The limitations of the static plans that often resulted from these formal studies were, however, soon discovered. The critics suggested informal and incremental planning to ensure flexibility, creativity and strategic thinking to comprise emergent strategies as well as planned strategies. In previous IS planning research, there appears to be a contradiction between the published planning methods and the generally held views about effective implementation of IS planning process. The explicit methods described in IS literature predominantly assume a comprehensive IS planning process. Despite the fact that many researchers consider incremental approaches to be more effective, methods that can be used to facilitate incremental IS planning are few, not detailed enough and not comprehensive. The four cycle's method introduced attempts to combine the strengths of both the comprehensive and incremental planning to be able to recognize emerging trends and to make an e-business strategy. The method provides a basic schedule for organizing planning activities. IS planning is seen as a continuous process that is periodically adjusted to the expectations of the participating managers. Practicing managers can use the method to facilitate implementation of an incremental and continuous IS planning process.

2.8. SISP Success Predictors

There is an overwhelming consensus in the literature that no other process predicts the SISP success as well as top management commitment and active participation (Ang and Teo, 2001; Bechor et al., 2010). Top management plays a key role at enabling good communication and cooperation between different departments and different stakeholders which have specific information needs and opinions about IT issues. Other important areas of top management involvement are: The promotion of the commitment to change, the control of the SISP implementation and the initiation of regular updates of the SISP plan. Strategic business planning represents the most sophisticated and complete process of strategic thinking that provides the enterprise with the capability of continuous control and analysis of the long term alignment between all relevant environmental and enterprise characteristics (Ruohonen, 1996). This process is composed of four phases (Hunger and Wheelen, 1998): Environment scanning, strategy formulation, strategy implementation and strategy evaluation and control. Top management sophistication measured as the quality of top management knowledge and know-how through all four phases of the strategic business planning process was proven to have an important positive effect on the efficiency and spread of IT use in the enterprises (Gupta and Collins, 1997).

Until the 1990s, most authors considered the role of IT limited to the operational level of planning (Garg et al., 2002) and did not consider IT as a technology that could create important competitive strategic advantages (Griffiths et al., 1990). However, in the last 20 years, such views significantly changed. Today, IT is considered one of the key general purpose technologies (Bresnahan, 2001) that can deliver strategic advantages through all the four phases of strategic planning (Garg et al., 2002) and radically change the process of the creation of goods in the enterprises (Hitt and Snir, 1999). Thus, it has become essential that the top managers themselves become power users of IT since without the first-hand knowledge and personal experience, top managers can hardly be able to successfully manage SISP and capture the potential of IT. The need to align the business strategy and the IT strategy has long been advocated as necessary for an enterprise to gain sustainable competitive advantages by both researchers and practitioners (Chan and Sabherwal, 2001; Garg et al., 2002). For this reason, copying the IS from competitors does not create large benefits unless the enterprises have very similar business strategies (Chan and Sabherwal, 2001). The need to align IT with business needs is thus a recognized SISP objective (Earl, 1993) present in several SISP success models (Grover and Segars, 1998).

Enterprises have limited resources to invest in IT. Consequently, evaluating and prioritizing IT projects become important in order to ensure efficient and effective allocation of the available resources. For this reason, a priority system positively influences the success of the IS/IT strategy implementation (Hartono et al., 2003) and is thus recognized as an important activity that influences SISP success (Ang and Teo, 2001; Bechor et al., 2010). Such a system should not be a reflection of the power of any stakeholder group, but rather reflect the importance of an IT project for the achievement of a business strategy. Good personal and professional competences of project team members lead to successful management of IT

and result in projects that are, with high probability, completed on time and on budget. The ability to obtain sufficiently competent project leaders and team members from the ranks of the middle management was thus soon recognized as a critical SISP success factor (Nelson and Somers, 2001). In SISP, competence includes more than just familiarity with the technical aspects of systems development. Business process identification, knowledge about business processes, as well as interpersonal skills are even more important since they facilitate greater integration between the business planning and the SISP process (Ang et al., 1997).

There is a wide spread consensus in the literature that enterprises can only gain the majority of benefits from IT investments if they complement such investments with changes in business strategy, structure, processes and culture (OECD, 2004). The successful design and implementation of the organizational changes required for a productive use of IT is, however, one of the hardest SISP success predictors to manage successfully because it is accompanied by significant risks, increased complexity and large costs (Appleton, 1997). Thus, it is not surprising that the underestimation of the magnitude and number of difficulties an enterprise encounters while managing this SISP success predictor is the most common reason that the deployment of IT ends unsuccessfully (Nelson and Somers, 2001). Several authors include the design and implementation of technical changes in the overall success predictor of change management (Kuang et al., 2001; Nelson and Somers, 2001). However, establishing IS goals, planning software functionality, choosing appropriate applications and managing the conversion from the old to the new IS require specific know-how which differs from the know-how needed to manage organizational change. Since monitoring these two “change” success predictors separately enables a clearer attribution of task responsibility to individual internal stakeholders (IT management vs. top management).

The importance of user satisfaction and acceptance of the new IS as a predictor of a successful SISP implementation is well documented (Bechor et al., 2010). When an enterprise involves key users in the SISP process, they get a broader understanding of the significance of the SISP process for the enterprise as a whole and better comprehend the necessity to change their tasks (Bingi et al., 1999) which lowers their overall resistance to change. User involvement in SISP thus positively impacts the flexibility of the IS, which in today’s uncertain environment is often an important benefit (Palanisamy, 2005). End user training is necessary when enterprises implement SISP because it provides the necessary knowledge to end users for efficient execution of their tasks within the newly deployed IS. The goal of the training should be to enable the users to perform new tasks, do existing tasks faster and increase their quality of work. Good user training also significantly reduces the resistance to change from the end users (Mahrer, 1999). Gottschalk (1999) also found out that if enterprises pay attention to user training during the planning stages of SISP, user training becomes a good predictor of the success of SISP implementation.

2.9. Early Banking Operations in Ghana

The banking industry in Ghana has undergone far reaching changes from colonial times through independence to the present. Banks

are financial institutions that provide a range of services to their customers: Savings, money transmission and credit services, safe custody and portfolio management functions, and in the process making profits. Before the 1950s, the number of bank accounts in Ghana was very few and what mattered most was the personal contact between the Bank Manager and his customers. There was hardly any urgent demand for information because of the low volumes of transactions. This made it possible to satisfy customers with manually kept records. Thus the majority of banking services were performed using manual operations and personal contact with customers without much information transfer and handling of customer data.

As commercial activities increased and people developed more banking awareness, the volume of work grew and so did the demands on the bankers' services from the customers. The manual system could no longer cope with the demands from customers. Neither did it meet managements' need for timely and accurate information to cater for the dynamic business environment (Andoh, 1998). For instance, within the banks, a lot of mundane and boring jobs like interest rate calculation and long tedious additions were still being done manually by staff. In the early 1950s, however, electro-mechanical machines were introduced into the banking industry in Ghana. This enabled customers to have their bank statements on time and within the banks, tedious jobs like interest rate calculation were taken over by machines, making their jobs more enjoyable and boosting staff morale. Prior to technological development, banks used the manual system for their operations and customers had to travel to banking halls where they have opened their account to transact business with that particular bank.

2.10. Ghanaian Banks

The banking sector is comprised largely of commercial banks, savings and loans associations as well as rural and community banks. The Central Bank often called Bank of Ghana (BOG) exercises oversight responsibility over all the financial institutions in the country. In an effort to ensure systematic development of the banking system, the Central Bank has the responsibility of ensuring that banking is responsive to the needs of the Ghanaian public. The banking system is by far the largest component of the financial system. The banking sector has undergone several structural changes following the implementation of a series of reforms in the sector.

The BOG pursues a liberal policy with regard to entry into the banking system. Rose (1999) defines banks as "those financial institutions that offer the widest range of financial services, especially credit, savings and payment services and performs the widest range of financial functions of any business economy." Over the years the banking industry has experienced several losses. Banks that had been performing well suddenly announced large losses due to credit exposure that turned sour, interest rate position taken, or derivatives exposures that may or may not have been assumed to hedge balance sheet risk. In response to this, banks have almost universally embarked upon an upgrading of their risk management and control systems (Santomero and Mello, 1996).

The Ghanaian economy has experienced high influx rate of foreign banks in recent times. Banking operations are characterized with complexity and competition. To remain competitive, there is the

need for a scientific approach in operations. One such an approach is ISS. Ghana has 27 universal banks, 135 rural banks and 49 non-bank financial institutions, including leasing firms, mortgage providers, finance houses, and savings and loan institutions and that is without counting the thousands of "susu" collectors, who serve as informal, small-scale depository institution for market traders and shopkeepers. Of the 27 universal banks, 10 are locally owned while the remaining are backed by international owners; a mixture of European, American and African banking groups (The Report, Ghana, 2014). Many business managers operate in an information fog bank, never really having the right information at the right time to make an informed decision. Instead, managers rely on forecast, best guesses, and luck. The result is over or underproduction of products and services, misallocation of resources, and poor response time. The purpose of this study was to determine the key variables in IS planning of six banks in the Greater Accra Region of Ghana. The main objective of the study is to explore the success predictors of SISP and to investigate the staff participation in ISS formulation. The benefits of ISS to banks discovered by the study would be beneficial to the banking industry. Scholars interested in the development and implementation of ISS would also benefit from this research work. ISs professionals would as well benefit from this research since it has revealed many issues about ISs planning. Policy makers would not be left out of the benefit from this research work.

3. METHODOLOGY

This study adopted the survey methodology. The method allows the results of the study to be generalized from the sample perspective, to the entire population. Thus the results obtain also give high level of reliability. Taking into account the purpose of the study and the research objectives, this study is comfortably placed within a scientific epistemology of logical positivism because it allows IS researchers to answer research questions about the interaction of humans and computers and it also emphasis on quantitative data. The cases investigated were three local banks and three foreign banks. The six banks used were named Bank A, Bank B, Bank C, Bank D, Bank E and Bank F for the sake of anonymity. The populations for the study were the strategic and the operational staff. All the strategic staff and the operational staff were considered at their Head Offices in Greater Accra region.

With adherence to a survey research methodology, this study used the questionnaire instrument. Out of the 62 copies of questionnaire for the strategic staff, 32 (51.6%) copies of questionnaire were completed and returned. Similarly, for the operational staff, 348 copies of questionnaire were administered, and 216 (62.1%) copies were completed and returned. The total number of questionnaire returned was 248 out of 410, presenting a response rate of 60.5%. The sampling technique for the operational staff was simple random sampling. Random sampling includes choosing operational staff from a population through unpredictable means. But because the population is relatively small, the researcher decided to use all the strategic staff instead of a sample.

The Statistical Package for Social Sciences (SPSS) was used to analyze the data. A simple frequency, percentages and Chi-square

test of independence to ascertain the significance of the relationship between variables were used to present the results of the study. Ethics were observed accordingly in conducting this research. Introductory letters were sent to all the banks for permission to use them in the study. In the data collection process, informed consent of the respondents was sought and respondents were guaranteed anonymity and confidentiality by the researcher. All citations were duly acknowledged and all participants treated respectfully.

4. DISCUSSIONS ON MAJOR FINDINGS

This section covers the discussion of major findings in relation to both the research objectives and existing knowledge. The discussion segment provides the researcher the opportunity to highlight the reflections, differences, similarities, and extends current knowledge of the area in which the study has been carried out. It is also a chance to demonstrate exactly what the researcher knows about the topic by interpreting the findings and outlining what they mean. A discussion section of a research should demonstrate the original thinking. The research must underpin what is already known about the area. In addition, where something new has been discovered it is important to outline what is new and compare it to what is already known. It is necessary to consider how one's results would extend the knowledge about the field.

4.1. Human Resource Requirement

In many organizations, IS and human resources management (HRM) have become full strategic partners at the governance level. The strategic potential of HRM is well recognized as effective HRM practices support business goals and objectives (Noe et al., 2010; Wofford, 2002). Human resource is the set of individuals who make up the workforce of an organization, business sector or an economy. In any IS environment, people play a very pivotal role. In order to formulate and implement the ISS, the human resource must be taken into consideration. If the right people are not used, it may affect the formulation as well as the implementation of the ISS. For this reason, the strategic staff respondents were asked to indicate the level of quality of their human resource to achieve their goals in the next 5 years. The analysis of the responses by banks is presented in Table 1.

All the respondents from the foreign banks (Bank D, Bank E, and Bank F) indicated high human resource quality. Four respondents from each of Banks B and C indicated that the bank has high human resource quality. One (20.0%) respondent from Bank C indicated that the banks have low human resource quality whilst 2 (33.3%) of the respondents from Bank B also indicated that the human resource quality is moderate. The quality of staff can affect the formulation and implementation of ISS. Low quality staff can

affect the ISS negatively whilst high quality staff can affect the ISS positively. Some of the banks also poach experienced staff from other banks.

4.2. Financial Resource Requirement

Strategic art is the skillful balancing of ends (objectives), ways (courses of action), and means (resources) (Chen et al., 2010). The financial resources are the means by which the bank can acquire the technology. The financial strength determines whether the bank is in the position to acquire the technology or not. To find out whether the bank is in position to acquire new technology, the strategic staff respondents were asked to indicate the financial position of the bank. The responses are presented in Table 2 and analyzed on bank bases.

Five out of the six banks have high financial position. Bank D, Bank E, and Bank F which constitute the foreign banks all have high financial positions. Two of the local banks (Bank A and Bank B) also recorded high financial position. Bank C is the only local bank that did not record hundred percent high financial position. For this bank, some of the respondents stated moderate whilst the remaining 3 (60.0%) also indicated high financial position.

4.3. IS Infrastructure

Infrastructure is basic physical and organizational structures needed for the operation of an enterprise or the services and facilities necessary for an economy to function (Sullivan and Sheffrin, 2003). It can be generally defined as the set of interconnected structural elements that provide framework supporting an entire structure of development. The IS infrastructure is very important when it comes to implementation. For this reason, the operational staff respondents were asked to indicate the level of IS infrastructure in the bank. Table 3 presents the responses from the operational staff.

IS infrastructure has been identified in recent years in some businesses as having a critical impact on the firm's ability to use IT competitively. Although a flexible infrastructure is considered highly valuable under certain circumstances, it is difficult to plan and to measure because there is no common, operational definition (Duncan, 1995). Relatively few of the operational staff 3 (1.4%) described the level of IS infrastructure as low. Most of the operational staff 197 (91.2%) indicated that, the level of IS infrastructure is high. This opinion is also shared by most of the strategic staff 31 (96.9%). It could be inferred from the Table 3 that, most of the banks have a high IS infrastructure to implement their ISS. The foreign banks have a very high IT infrastructure to implement the ISS whilst the local banks do not have that high infrastructure for the ISS implementation. It is worth noting that

Table 1: Responses on quality of human resource quality by banks

N=32	Frequency (%)					
	Bank A	Bank B	Bank C	Bank D	Bank E	Bank F
Low	-	-	1 (20.0)	-	-	-
Moderate	-	2 (33.3)	-	-	-	-
High	6 (100.0)	4 (66.7)	4 (80.0)	5 (100.0)	5 (100.0)	5 (100.0)
Total	6 (100.0)	6 (100.0)	5 (100.0)	5 (100.0)	5 (100.0)	5 (100.0)

Source: Field data, 2016

Table 2: Responses on the strategic staff on financial position by banks

N=32	Frequency (%)					
	Bank A	Bank B	Bank C	Bank D	Bank E	Bank F
Moderate	-	-	2 (40.0)	-	-	-
High	6 (100.0)	6 (100.0)	3 (60.0)	5 (100.0)	5 (100.0)	5 (100.0)
Total	6 (100.0)	6 (100.0)	5 (100.0)	5 (100.0)	5 (100.0)	5 (100.0)

Source: Field data, 2016

Table 3: Levels of IS infrastructure by banks

No=216	Frequency (%)					
	Bank A	Bank B	Bank C	Bank D	Bank E	Bank F
Low	-	-	3 (8.8)	-	-	-
Moderate	5 (11.6)	5 (13.5)	6 (17.7)	-	-	-
High	38 (88.4)	32 (86.5)	25 (73.5)	30 (100.0)	37 (100.0)	35 (100.0)
Total	43 (100.0)	37 (100.0)	34 (100.0)	30 (100.0)	37 (100.0)	35 (100.0)

Source: Field data, 2016. IS: Information system

some of the respondents from Bank C indicated that the bank IS infrastructure is low. Only the local banks indicated that the banks have moderate IS infrastructure. The level of IS infrastructure also affects the success of IS implementation.

4.4. Improved Technology

Technology is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, methods of organization, in order to solve a problem, improve a preexisting solution to a problem, achieve a goal or perform a specific function (www.eHow.com). IT has become a necessary component in any organization with increasing strategic significance. All the banks use technology one way or the other. Therefore, new technology could be bought to replace obsolete technology or the existing technology could be upgraded. There are different types of technology used in the banking sector to achieve their goals. To find out how the respondents expect to achieve the goals of the bank in the next 5 years, the strategic staff respondents were asked to indicate the type of technology that the bank would need. From the responses, all the respondents from the foreign banks indicated that, the technology needed by the bank to achieve its goals in the next 5 years are improved network infrastructure, more servers and work stations. The respondents from the local banks (Bank A, Bank B, and Bank C) also indicated that the banks need improved banking software and IT outsourcing (to outsource some of the banking operations). It could be inferred that, the technology needed by the foreign banks is completely different from that of the local banks to achieve their respective goals.

4.5. Willingness of Staff to Use New Technology

New technology is invading our lives at an ever-increasing rate. While many people find new technology exciting and can't wait to get involved in it, some people may feel intimidated by it, or feel that it only complicates their lives and puts more stress on them. Some staff find it difficult to change from a manual system to a computerized system. Changes are difficult to make, therefore it was important to find out whether the staff, both strategic and operational are willing to use a new technology. Analyzing the responses from the operational staff, 10 (4.6%) out of 216 respondents stated that, they are not willing to use

a new technology since they are already used to the existing technology. 20 (9.3%) respondents also indicated that they are indifferent using a new technology, and 186 (86.1%) respondents affirmed their willingness to use a new technology. For the strategic staff, the responses were not different, 2 (6.3%) out of 32 respondents were indifferent. This suggests that, even at the strategic level not all staff are willing to use new technology whilst 30 (93.8%) respondents affirmed their willingness of using a new technology. Karimi et al. (1996) found out that the degree of IT integration within firms is a primary determinant of firms' willingness to use IT as part of their strategic response to globalization.

Change is difficult but it is also inevitable. To find out the relationship between work experience and the willingness to use a new technology, a cross tabulation of the two variables was constructed. Even though cross tabulation could be done for the responses of both strategic and operational staff, the researcher chose to present that of the operational staff (Table 4) for lack of space. As the number of years increase, the willingness to use new technology also increases. Of the 15 operational staff with <1 year work experience, majority (10) of the respondents indicated their unwillingness to use a new technology. Since the software (SPSS) has the capability of testing for the relationship between the two variables, this was requested for. The statistics at the bottom of Table 4 indicate that, there exists a relationship between work experience and willingness to use a new technology. As can be seen from the correlation coefficient (0.569), this relationship is positive and quite strong.

From the statistics at the bottom of Table 4 for the foreign banks ($N_f = 102$, Chi-square = 73.578, $df = 4$, $P = 0.000$, and $COR = 0.710$), there exists a relationship between work experience and willingness to use a new technology. As can be seen from the correlation coefficient, this relationship is positive and quite strong. For the local banks ($N_l = 114$, Chi-square = 9.194, $df = 4$, $P = 0.056$, and $COR = 0.245$) there also exists a relationship between work experience and willingness to use a new technology but this relationship is not strong. Comparing these two statistics, it could be suggested that the foreign banks staff are more willing to use new technology that the local banks staff.

4.6. Staff Participation in the ISS Formulation

The formulation and implementation of ISS are very important phases in any ISS cycle. The people involved are equally important as the process. Basic strategic planning is comprised of several components that build upon the previous piece of the plan, and operates much like a flow chart. However, prior to embarking on this process, it is important to consider the players involved. The caliber of people involved can have a great impact on the formulation of the ISS. For this reason, the strategic staff respondents were asked to identify the staff participation in ISS formulation. The strategic staff responses are presented in Table 5.

From the Table 5, there are three participants in ISS formulation. The local banks concentrate on management team and IT department for the formulation of ISS. The story is different for that of the foreign banks. For the foreign banks they solely depend on technology group for the formulation of ISS. The technology group is a group within each of the foreign banks that has the responsibility of formulating ISS for the respective banks. It is also important to note that, outsourcing and all staff are not considered in the formulation process. Wilson (1999) also states that, 6.4% of the respondents claim that ISS is a function of individual department, which is at odds with the organization-wide focus. Top management is responsible for the development and implementation of ISS since ISSs can have a significant strategic

impact on an organization's performance (Clemons and McFarlan, 1986). Top management also needs to take responsibility for fostering ISSs with the potential to provide this impact. There are many approaches to establishing ISS planning teams. Broadly, there are three main approaches: The use of planning specialists, general IS staff or coalition teams (Grover and Segars, 1998).

4.7. SISP Success Predictors

Strategy formulation involves designing and developing the company's strategies. Determining company's strengths aids in the formulation of strategies. Strategy formulation is generally broken down into three organizational levels: Operational, competitive, and corporate. The worryingly low implementation success rates lead to the realization that SISP is a significantly more complex process that has to address not only the relevant technological issues but also organizational, behavioral and managerial aspects. A successfully implemented SISP process does not end with the implementation of a technologically superior IS, but also encompasses appropriate organizational changes, business process reengineering and organizational learning for a more productive use of IT. It is especially important that the capabilities of the SISP process constantly improve to reflect changing technology and business related developments. For this reason, the operational staff respondents were asked to identify the important SISP success predictors. The responses are analyzed and presented in Table 6.

Table 4: Responses on work experience by willingness of staff to use new technology

N=216	Willingness of staff to use new technology			Total
	Not willing	Somehow willing	Most willing	
Working experience				
<1 year				
Count	10	5	0	15
Expected count	0.7	1.4	12.9	15.0
1-5 years				
Count	0	15	65	80
Expected count	3.7	7.4	68.9	80.0
6-10 years				
Count	0	0	100	100
Expected count	4.6	9.3	86.1	100.0
11-15 years				
Count	0	0	16	16
Expected count	0.7	1.5	13.8	16.0
16-20 years				
Count	0	0	5	5
Expected count	0.2	0.5	4.3	5.0
Total				
Count	10	20	186	216
Expected count	10.0	20.0	186.0	216.0
No=216	Chi-square=178.222	df=8	P=0.000	COR=0.569
Nf=102	Chi-square=73.578	df=4	P=0.000	COR=0.710
Nl=114	Chi-square=9.194	df=4	P=0.056	COR=0.245

Source: Field data, 2016

Table 5: Staff participation in the ISS formulation

Ns=32	Frequency (%)					
	Bank A	Bank B	Bank C	Bank D	Bank E	Bank F
Management team	4 (66.7)	4 (66.7)	3 (60.0)	-	-	-
IT department	2 (33.3)	2 (33.3)	2 (40.0)	-	-	-
Technical group	-	-	-	5 (100.0)	5 (100.0)	5 (100.0)
Total	6 (100.0)	6 (100.0)	5 (100.0)	5 (100.0)	5 (100.0)	5 (100.0)

Source: Field data, 2016. ISS: Information system strategy

Table 6: Responses of SISP success predictors by operational staff

No=216	Frequency (%)					
	Bank A	Bank B	Bank C	Bank D	Bank E	Bank F
Top management involvement	-	-	-	6 (20.0)	11 (29.7)	10 (28.6)
Staff training and involve	12 (27.9)	6 (16.2)	9 (26.5)	-	-	-
Resources	18 (41.9)	21 (56.8)	18 (52.9)	14 (46.7)	15 (40.5)	15 (42.9)
ISS alignment	13 (30.2)	10 (27.0)	7 (20.6)	-	-	-
Organization and technical changes	-	-	-	10 (33.3)	11 (29.7)	10 (28.5)
Control and evaluation	-	-	-	-	-	-
Total	43 (100.0)	37 (100.0)	34 (100.0)	30 (100.0)	37 (100.0)	35 (100.0)

Source: Field data, 2016. ISS: Information system strategy, SISP: Strategic information system planning

Different banks perceived SISP success predictors differently. This is also seen in the origin of the banks. For the local banks, the most important SISP success predictors are resources, IS alignment to the business strategy and staff training and staff involvement. The foreign banks also indicated that, the most important SISP success predictors are resources, organizational and technological changes and top management involvement. It could be inferred from the Table 6 that, according to the respondents, the most important SISP success predictors are resources, organizational and technological changes, IS alignment to the business strategy, top management involvement, and staff training and staff involvement. It is worth noting that none of the banks considered control and evaluation as an important factor. All the banks, both local and foreign, recognize the importance of resources to the success of SISP, since majority of the respondents indicated that. In response to the same question, the strategic staff also responded in a similar manner. Grover and Segars (1998) researched into SISP Success and concluded that, SISP requires significant outlays of increasingly scarce human and financial resources.

5. CONCLUSION

As the field of strategy management has expanded, strategy researchers and practitioners have shown increasing interest in the role of IT in strategy formulation and implementation, and in its impacts on financial performance. Technology has brought about a complete paradigm shift in the functioning of banks and delivery of banking services. Banks must consider the “mechanistic” perspective on strategy formulation from the business strategy literature into current SIS frameworks. According to such a perspective, management should in a first phase engage in a purely cognitive formulation process: Through the appraisal of the environment, its threats and opportunities, and the strengths and weaknesses of the organization, key success factors and distinctive competencies are identified and translated into a range of competitive strategy alternatives. Once the optimal strategy has been selected, agreed upon and laid out in sufficient detail, the next phase of implementation follows. The perspective is based on a set of premises or assumptions, to be found in most SIS models, such as the critical success factors, the value chain, the strategic thrusts, and the sustainability analysis. Specifically, the approach can be characterized as being conscious and analytic, top-down and control-oriented, simple and structured, and separating action and structure.

The findings revealed that for the local banks, the most important SISP success factors are staff training and staff involvement,

resources, and IS alignment to the business strategy. For the foreign banks, the most important SISP success factors are top management involvement, resources, and organizational and technological changes. There is the need to develop all the resources (human, physical, financial, technological) capabilities for the enhancement of organizational flexibility and performance. The role of intangible (reputation, skills, technical know-how, etc.) and organizational learning are relevant to the capabilities concept and hence to the implementation of strategic management. It is essential for banks to manage both intangible and tangible resources and capabilities in order to achieve strategic performance. The key to achieving strategic capability is for the banks to coordinate all resources and also to develop organizational learning. Bank C must take steps to increase the financial base and both Bank B and Bank C must increase the quality of their human resources base in order to stay competitive and much the following banks. This could be done through intensive training.

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