
Aligning Information Systems strategy with the Business Strategy in a South African Banking Environment

Ray M Kekwaletswe
Ray.Kekwaletswe@wits.ac.za
School of Economic and Business Sciences
University of the Witwatersrand
Johannesburg, South Africa

Palesa Chuene Mathebula
Palesa.Mathebula@gmail.com
Johannesburg, South Africa

Abstract

Although literature shows that the alignment of information systems with business strategies is important to organizational performance, there is no standardized framework to guide how this alignment can be improved, notably in the context of a banking environment. South African banks tend to have mixed realizations in terms of the expected value of information systems investments, and this paper argues that this is primarily due to misalignment between the Information systems strategy and the business strategy. Information systems projects appear to not deliver what they are intended to; business and information systems managers seem to lack a clear understanding of each other's environments, and subsequently the required resources are allocated inappropriately. This paper grapples with ways by which a South African bank may improve alignment of information systems and business strategies. Following interpretive research paradigm, the strategic alignment model was used as a theoretical framework for a case study conducted in one of South Africa's leading banks. Informed by the empirical evidence, this paper concludes with a conceptualized framework for the improved alignment of information systems strategy and business strategy, in a banking environment.

Keywords: Banking environment, business-IS strategic alignment, strategic alignment model, IS strategy, business strategy, South Africa

1. INTRODUCTION

Although South African banks invest a lot of capital in Information Technologies, they tend to have mixed realizations in terms of achieving the actual value of IS investments. In this paper, it is argued that the problem is a consequence of misalignment between the Information Systems (IS) and the business

strategies. While the subject of business-IS strategic alignment is being increasingly researched, the factors that affect alignment, especially in the context of a South African banking environment, have to date not been adequately addressed. Thus, this paper grapples with ways by which the alignment of IS and the business strategies could be improved.

The IS literature consistently highlights the importance of alignment if organizational success is to be achieved. Varied studies, such as Chan (2002) and Almajali & Dahalin (2011), have shown that alignment and performance are connected. However, proper alignment and the subsequent success is hardly achieved at the bank studied, mostly because the unit responsible for IS does not fully understand the business needs and, moreover, IS and the various business units seem to lack a close relationship. This then means that they are not communicating the goals of their respective units to each other and do not discuss how they can contribute to each other's success in reaching those goals.

For this reason, the study assessed the bank's business-IS strategic alignment, in order to inform ways that the IS unit may support the goals and activities of the bank at all levels – so that the business value of IT is realized.

2. THEORETICAL FOUNDATIONS

Information Systems

Whitten, Bentley and Dittman (2004) define IS as a collection of people, data, processes, procedures, software and hardware that interact to collect, process, analyse, store and distribute information needed to support an organization and systems. Benyon-Davies (2009) also concur with the above by defining IS as all systems within an organization contributing to the distribution of information. Peppard and Ward (2002) neatly summarise the description of IS by stating that it is an organised structure of interrelated components that are concerned with a purposeful use of IT.

It can be noted that IS in banking has progressed because in earlier literature, Baldwin (1991) noted that IS in banks was mainly used to increase the delivery speed and quality of services and the management of the enormous amount of information the banks have. A decade later, both Jalava and Pohjola (2002) and Kraemer and Dedrick (2001) added that IS in banking enables advanced development of products, enhanced market infrastructure, implementation of reliable methods for controlling risks and helps the banks to reach geographically distant and diversified markets.

In a later study by Khanna (2011), it was suggested that IS in banking has been mainly used in two different ways. Firstly, for

communication and connectivity and, secondly, for business process re-engineering. In view of the diverse scope of IS definition and use thereof, it is important to note that recently, due to a significant decline in the cost of information technology and improved speed and processing power of computers, IS have moved from their traditional role of being a tool of back office support to one offering opportunities in the banking industry (Agarwal, 2012).

It is, thus, clear that there are a number of different definitions regarding what signifies IS.

Defining IS Strategy

Issa-Salwe and Aloufi (2011) define an IS strategy as a plan to adopt information systems according to organizational demands in order for the information and systems to support the overall business strategy. According to Peppard and Ward (2002), an IS strategy helps to determine the organization's capabilities and addresses the question of how it can support the business goals and objectives.

Moreover, according to Sabherwal, Hirschheim and Goles (2001), an IS strategy ties together the organization's goals, information needed to support those goals and the implementation of computer systems to provide information to meet the organization's demand to support those goals. Other studies by researchers (e.g. Earl, 1989; Alter, 2005 & Ward, 2012) suggest that an IS strategy helps to determine the organization's capabilities and addresses the question of how it can support the business goals and objectives.

In summary, an IS strategy deals mainly with aligning the development of IS with the needs presented by the business unit (Peppard and Ward, 2002).

Defining Business Strategy

Zahra and Covin (1993) define business strategy as the long-term plan an organization formulates with the objective of achieving a desired future for the business. It involves establishing the purpose and scope of the organization's activities, considering the nature of the business it is in and the environment in which the bank operates as well as their competition and customer demands.

This is supported by Silviu (2007) who adds that business strategy is the establishment of the business's long-term goals and objectives

and the adoption of actions and allocation of resources necessary for meeting those goals in order to succeed in its market against competition.

Business-IS Strategies Relationship Model

There are several models that have been put forward by researchers (e.g. Galliers, 1993; Earl, 1989 & Alter, 2005) that show the relationship between the external business environment in relation to the business and IS/IT strategies in an organization. The literature also illustrate the different relationships between the components with some researchers providing details when demonstrating the relationships between IS and business strategies. An example of such models is the IS strategy components model on Figure 1.

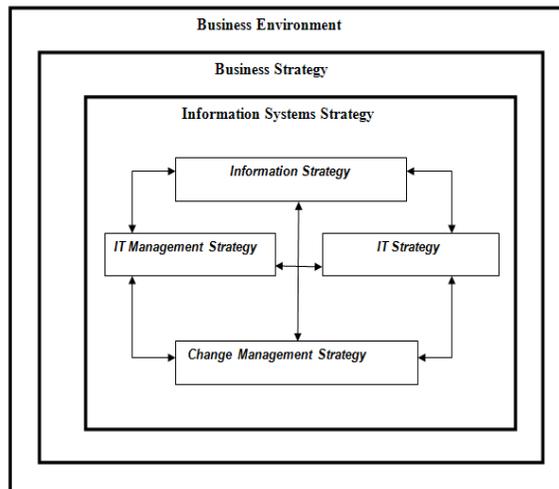


Figure 1: Information systems strategy components model (Galliers, 1993)

In the explanation of the information systems strategy components model, Mocker and Teubner (2005) basically suggest that the business environment in which the organization exists informs the business strategy, i.e. various changes that take place in the external environment such as new competitors entering the market, population shifts, and so forth can affect the economy negatively or positively and therefore the business environment. In order to keep up with the changes in the business environment, the business strategy should be fluid enough to be adjusted accordingly. As a result of the changes in the business strategy, the IS strategy will also be affected by the changes and may result in adjustments in order to keep up with the business goals.

Defining Alignment

Numerous definitions of alignment can be found in the literature. As a result, it is difficult to find a common definition of alignment. Luftman, Papp and Brier (1999) define the concept of alignment in a simplistic manner and note that alignment is simply doing the right things, i.e. effectiveness, and doing things right, i.e. efficiency. In a later study by Luftman (2005) he provides a practical definition of alignment by stating that alignment refers to basically using IS in a way that is appropriate to support business needs, strategies and objectives.

The definition by Henderson and Venkatraman (1993) describe alignment as the degree of fit and integration among the following four components: business and strategy, business and IS infrastructure; while Chan, Sabherwal and Thatcher (2006) simply describe alignment as the fit between business and IS strategic orientation. Reich and Benbasat (2000) brought forward a practical definition by describing alignment as the extent to which the IS goals and objectives support and are supported by the business goals and objectives. In support of the preceding practical definition, Gartlan and Shanks (2007) agree that alignment of business and IS strategies involves the process of formulating both the business and IS strategies that are complementary to each other and also cohesive.

The Importance of Alignment

The IS literature repeatedly focuses on the importance of alignment in order to ensure organizational success.

Studies have also shown that IS alignment and performance are connected (Chan, 2002; Almajali & Dahalin, 2011). Furthermore, according to Basir and Norzaidi (2009), alignment is crucial because it assists organizations in ensuring that the areas which are needed for improved organizational performance are targeted by information systems (Das, Zahra & Warkentin, 1991). According to Newkirk and Lederer (2006), alignment enhances the understanding of business management about the importance of IS and at the same time improving the understanding of business goals and objectives by IS managers. It also maximises the return on investment for IS (Avison, Jones, Powell & Wilson, 2004; Chung, Rainer & Lewis, 2003).

Studies by Avison et al. (2004) and by Teo and King (1997) have also highlighted that through IS, a competitive advantage can be achieved as a result of alignment. Further studies concur by noting that alignment ensures that the IS unit supports the goals and activities of the organization at all levels in order to get business value from IS (Teo & King, 1997; Chan, 2002; Simonsen, 1999). Moreover, Lederer and Sethi (1996) note that when there is alignment, critical applications needed for growth are identified. Through that identification it is ensured that sufficient resources are allocated to those applications in order to provide direction as well as flexibility to react to new opportunities (Avison et al., 2004).

In addition to the above, according to Teo and King (1997), alignment ensures that IS planning and business planning activities are in sync in order to ensure seamless integration so that organizational goals and objectives can be achieved. Chan (2002) adds that alignment also ensures successful IS and business unit operations. The IS literature (e.g. Bowman, Davis & Wetherbe, 1983; Avison et al., 2004) also mentions the importance of innovation when it comes to alignment. They suggest that organizations need to constantly innovate and IS are the primary enablers of the innovation process because all business processes have a certain extent of information content. Bowman, Davis and Wetherbe (1983) note that alignment can successfully speed up innovation processes to ensure that business is in sync with the competitive needs in the business environment and current trends. Others (Nickerson, Jamie & Ho, 2003; Avison et al., 2004; Bleistein, 2004) conclude that aligned businesses should achieve more improved performance compared to those that are not aligned.

3. THEORETICAL FRAMEWORK

This section discusses Strategic Alignment Model (SAM), the underpinning theory chosen for the study. SAM is composed of four quadrants that consist of three components each as illustrated in Figure 2. It defines alignment along two dimensions. Firstly, the aspect of strategic fit which differentiates between the external domain and internal domain. The external domain is directed towards the business environment and the internal domain is directed towards the organization's administrative structures. Secondly, there is an element of functional integration which separates business

and IS, which means that as the business strategy changes, the IS strategy must also change in order to keep pace (Henderson & Venkatraman, 1993).

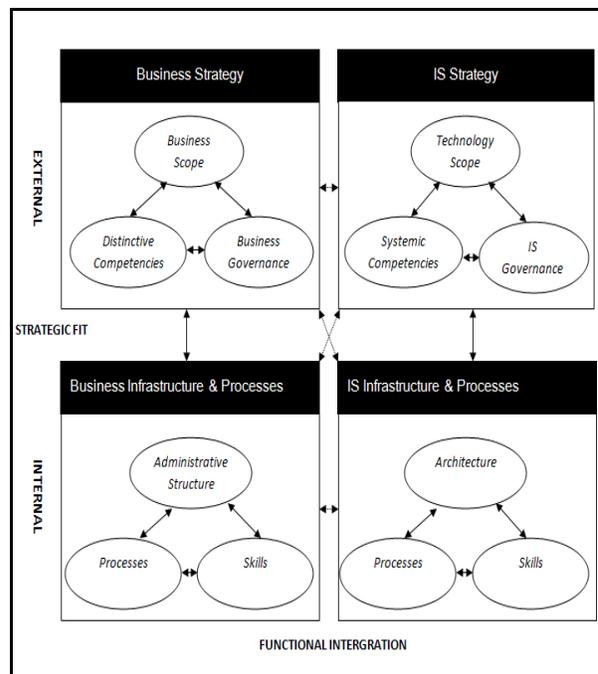


Figure 2: Strategic alignment model (Henderson & Venkatraman, 1993)

Overall, the model defines four domains with the following components in each domain: scope, unique competencies, governance, infrastructure, processes and skills. The SAM framework suggests that the above components should be in harmony in order to improve alignment (Silviu, Waal & Smit, 2009).

Linkages between domains

This section discusses the linkages that exist in SAM. According to Henderson and Venkatraman (1993), these linkages are necessary to ensure that all the domains and their respective components work as one unit. The vertical linkage in the model is the strategic fit. This linkage connects the internal and external domains and highlights that the internal decisions that the business makes will determine its position in the external marketplace. In essence, strategic fit refers to the use of both IS and the business strategies to determine the infrastructure and processes of both the IS and business units.

The second linkage is functional integration. This horizontal linkage is directly related to the alignment of the IS unit to the business unit. This linkage indicates that as the business changes, the information systems must also change in order to keep up. The functional integration linkage also illustrates how business can successfully position itself in the external market by leveraging the use of the internal IS. Studies by Ives, Jarvenpaa and Mason (1993) and Papp (2004) have found that functional integration can provide a competitive advantage in the external market and maximize the value of IS in an organization.

In order to understand how alignment between business and IS strategies could be improved in a South African banking environment, the SAM model was used because the model suggests that when the four domains and components are in harmony, alignment within an organization should improve (Silvius, Waal and Smit, 2009).

4. RESEARCH METHODOLOGY

Research Paradigm

In research, most researchers make a number of assumptions and have different perspectives on ways of viewing how things work (Voce, 2004). This can be seen in the various ways in which researchers conduct their studies. There are, however, certain principles and rules that can be followed in order to guide the actions and beliefs of researchers in their research. These guiding principles are referred to as a paradigm (Gephart, 1999). According to Voce (2004), a paradigm is a model on which research theories are built. The three main research paradigms are positivism, interpretivism and critical theory.

The interpretive paradigm was chosen as a philosophy informing this study. This paradigm was followed because the current study aims to report interpretations of individuals not based on facts but rather based on their beliefs, attitudes, shared meaning and understanding of the phenomenon. The aim was to conceptualize a framework that may inform how alignment of IS and business strategies can be improved in the South African banking environment, not to test or oppose a certain theory in the broader study field of strategic alignment.

Mode of Analysis

According to Klein and Myers(1999), the main motivation that informs researcher's decision for

choosing an interpretive research approach in information systems (IS) is the belief that knowledge about our reality is acquired through language, shared meaning, what we perceive and consciousness. The mode on analysis guiding this interpretive research approach was Hermeneutics. Sebastian and Dubravka(2010) and Bontekoe (1996) state that hermeneutics examine how the understanding of parts relates to the understanding of a larger whole and again how the understanding of larger whole relates to the understanding of a parts as shown on Figure 3.

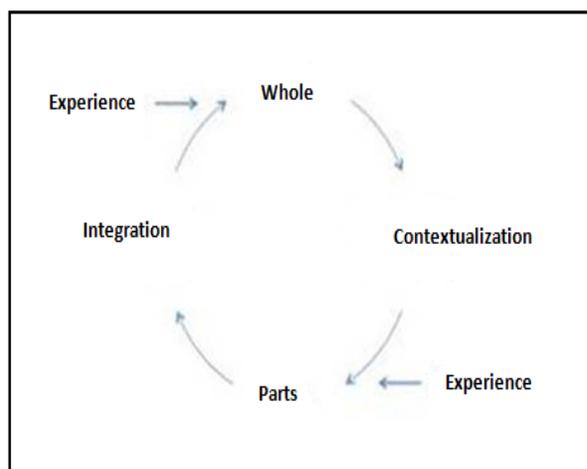


Figure 3: The basic form of the hermeneutic circle (Bontekoe, 1996)

According to Bargiela-Chiappini (2010), using the hermeneutic circle the researcher is able to put their interpretation on the data being analysed as a foundation for further research and in-depth understanding of a phenomenon rather than concentrating on the determination of textual meaning such as semiotics and narrative stories. Cole and Avison (2007) and Hayles (2003) further state that, as result of this approach, new research streams have emerged and can be immediately studied in ways that would not be possible if other research approaches were used.

The hermeneutics mode of analysis was followed in the study since we were merely interpreting and clarifying the meaning of texts collected, even if the texts were unclear, incomplete and seemingly contradictory.

Method

In the study, a qualitative research approach was chosen because it generates rich, detailed

and applicable data that contributes to an in-depth understanding of a study (Anderson, 2006). Ragin, Nagel and White (2004), further add that it is both interpretive and subjective and enables the researcher to study a social phenomenon. The qualitative research approach was helpful in this study because we are aware of the fact that people can perceive or view the same phenomenon, improving alignment, in different ways.

For the purpose of this study, a case study was utilized because case studies are useful when researching a specific field where the problem occurs. This strategy was useful because data was collected specifically from a bank.

The selection of participants was informed by Onwuegbuzie and Collins (2007) purposive sampling method. According to Onwuegbuzie and Leech (2005) with this sampling method, the participants are chosen carefully to provide the best results for the research. The participants' selection for this study represented the various divisions and different ranks, i.e., management, specialists and general positions within the bank. The divisions included were IS, finance and human resources, innovation and marketing, and data center operations. The above mentioned divisions were selected because the IS unit interacts mostly with them, thus we opted to include them in order to get their views. We also chose participants from different ranks because, although alignment is generally a management function, the carrying out thereof is usually an operational activity by middle and junior ranking employees.

An open-ended questionnaire was sent out to 15 participants in order to obtain diverse views from the bank population. The questionnaires were filled in by participants from various backgrounds in terms of age, gender, length of service, job rank and occupational field, thus representing the diversity of the bank population. Out of the 15 questionnaires e-mailed, a total of nine (9) questionnaires were returned partially or fully completed. The remaining six (6) were not returned. Semi-structured interviews were then conducted with three (3) participants who partially completed their questionnaires so that the questions that were not fully answered could be responded to, as well as to seek further clarity on the responses given.

Limitations of the data collection

During the data collection, the following limitations were encountered:

- Some participants' questionnaire responses looked like the participants may have consulted literature or other resources while giving responses. This may have been as a result of participants' reluctance to provide information that they may have perceived to expose their lack of knowledge on a particular subject. That is, the participants' responses were mostly somehow similar.
- During the interviews we could sense that some participants were merely providing desirable answers to questions because when the researcher probed more, they were not able to support their statements. This may have been as a result of participants' reluctance to reveal information that they may have perceived as sensitive or even seen to undermine their seniors or their co-workers.
- Due to time and financial constraints, we opted not to interview participants that have fully completed their questionnaire.

Given the limitations above and the fact that data collection was restricted to one bank, the study findings should be considered as indicative rather than conclusive and should not be generalised to other banks as they may not yield the same results.

5. DATA ANALYSIS AND DISCUSSION OF FINDINGS

The data collected was analysed per research theme (see Figure 4), guided by the research objectives and presented in Tables. The analysis of the questionnaire and interviews consisted of three parts: what we wanted to know, participants' responses and the brief comments. Similar responses were grouped and presented as one. Each table (representing a theme or sub-theme) was followed by a discussion of the findings, using hermeneutics as mode of analyzing the text, and the strategic alignment model was used as a lens.

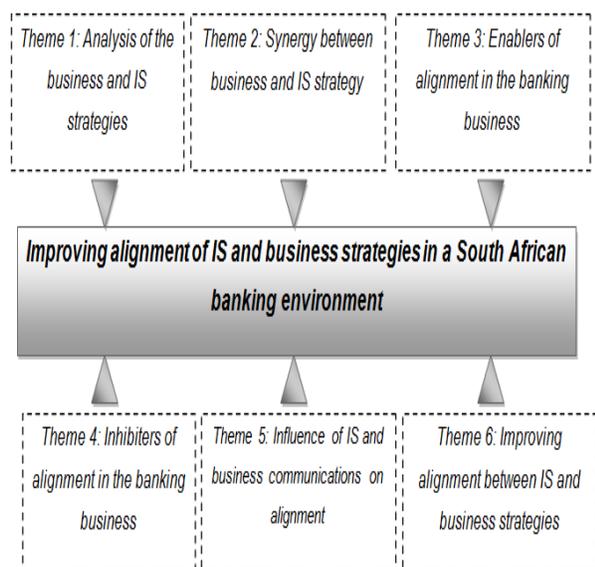


Figure 4: Themes used to analyze how the alignment of business-IS strategies can be improved.

The six themes, which were used in data analysis, were derived from the six study objectives, stated as follows:

- To analyse the bank’s business and IS strategies.
- To identify the synergy between business and IS strategies in a South African banking environment.
- To identify how alignment between IS and business is enabled or inhibited in the banking environment.
- To identify the influence of communication between business and IS managers on business-IS strategic alignment.
- To determine how alignment between business and IS strategies could be improved in a South African banking environment.

Theme 1: Analysis of the business and IS strategies

The aim was to understand the scope of the business, distinctive competencies and governance of the business. The questions asked were designed to assist us to understand what business the studied bank is in, how competitors affect the business environment, how the bank distinguishes itself from competitors and to also understand if the bank is subject to government regulations. Also, to understand the scope of the

technology and information systems, systemic competencies and the governance of IS in the bank. The findings revealed that the business strategy is guided by the environment in which the bank operates; competition; and customer demands. The findings indicated that the IS strategy is guided by organizational demands for the information and systems to support the overall business strategy, which is in turn guided by the external environment. The findings also indicate that the bank has systemic and distinctive competencies that differentiate them from their competitors, which they leverage to direct both their business and IS strategies. Lastly, governance plays an important role in the bank’s strategy because whatever direction the bank chooses, they have to ensure that they comply with South African government regulations.

Theme 2: Synergy between business and IS strategies

An analysis of the synergy between business and IS strategies was carried out to aid the researcher understand the interconnection (functional integration) of the external domains as guided by the strategic alignment model. The questions were aimed at revealing how well the IS and business strategies are communicated, how well the IS strategy objectives are linked to the business strategy and to establish how well the information systems, which are important for enabling the business strategy, are outlined in the IS strategy. The findings revealed that, important information systems are outlined in the IS strategy and linked to the business strategy and that the bank’s business and IS strategies are interconnected.

Theme 3: Analysis of how alignment is enabled in the banking environment

Analysis of how alignment is enabled in the banking environment was performed. The theoretical framework indicates that alignment is impacted by aspects such as how business and IS management support each other’s goals and objectives, and how the IS unit is involved in business strategy development. The study findings revealed that Business-IS unit partnerships are evident in the bank, although IS managers do not get consulted enough in business strategy development; they mainly get involved when they have to provide guidance on

technology and systems. The findings further revealed that Business managers also get involved in IS strategy development but mainly to provide business-specific information and input on finances. Overall, the alignment enablers are evident in The bank although there is a room for improvement.

Theme 4: Analysis of how alignment is inhibited in the banking environment

An analysis of how alignment is inhibited in the banking environment was carried out. The framework indicates that the management of the following aspects has an impact on alignment: the IS unit's failure to meet its commitments, failure of business to commit a budget for IS investments and lack of leadership by IS management. These factors are among the main inhibitors to alignment. The questions asked were intended to reveal how these factors are managed in the bank.

The study revealed that, the business unit does allocate budgets for IS investments; however, sometimes business fails to commit budgets if the business cases that are presented by the IS unit are not strong enough. Also, the IS unit generally meets its commitments by delivering quality projects within the allocated budget. Moreover, IS management generally demonstrates leadership but it was found that IS management was not accountable all the time. Based on the findings above there is an indication that the IS and business administrative structures and processes are integrated and there are also leadership skills evident within The bank which indicate that the inhibitors are well managed.

An analysis of the influence of communications between IS and business managers on alignment was carried out to aid the researcher understand the integration of the business and IS units (internal domains), guided by the strategic alignment model. The questions were aimed to uncover established communication structures and whether they are maintained between the business and the IS units. It was found that the relationship between IS managers and business managers and continuous communication and close partnerships between business and IS managers could lead to a mutual understanding of the business goals. The findings also revealed that, there are formal communication structures between the business

and the IS managers that have been established and those are well maintained. Continuous communication and close partnerships between business and IS managers is also evident. The findings above indicate that continuous communication (process) and close partnerships (structure) are apparent and seen as important in the bank because they facilitate a common understanding of the organization's vision by both business and IS managers. Thus, there is an understanding of their contribution towards those goals.

Theme 6: Improving alignment between IS and business strategies

The analysis on factors that could affect the improvement of alignment between IS and business objectives was guided by the elements of the strategic alignment model. First, the integration between external and internal domains (strategic fit) was analysed and, secondly, the connection (functional integration) between the business and IS domains was examined. Literature shows that that alignment occurs when business goals, processes and activities are in harmony with the information systems that supports them. The framework indicates how aspects such as IS plans which are implemented in the organization have an impact alignment, how the IS structure and skills support business plans, how the business administrative structure supports IS plans and also how the business structure evolves to fit new business opportunities enabled by new technologies. The questions asked were designed to assist the researcher to understand how those factors are managed at the bank. The findings revealed that, most IS and business plans are carried through to implementation, with the exception of some IS plans that are halted, often due to lack financial resources. It was also revealed that the business structure supports the IS plans and when required the IS structure is also able to change in order to support the business plans. Moreover, the bank's IS unit has adequate skills that ensure that the plans of the business are well supported. The business structure is also flexible and able to evolve in order to accommodate opportunities enabled by new technologies

Summary of Findings

This section concludes the analysis of data from both the qualitative questionnaire and semi-structured interviews. The data collection and

analysis were carried out ultimately to understand how an alignment of IS and business strategies could improve the banking environment.

The analysis indicates that business and IS strategies are mainly influenced by events that happen outside the organization such as government regulations and market competition also customer needs and technology trends. The analysis also shows resources that distinguish them from their competitors. There is also an indication that business and IS strategies are interconnected and that the business administrative structure and processes within the bank are well integrated. There are, however, aspects such as the business unit not understanding the IS unit objectives and a lack of IS unit involvement in business strategy development, that require some improvement in the bank.

It was also found that IS management demonstrates leadership. They do so by upholding the organization's values. It was, however, also found that the IS management is not accountable all the time. Continuous communication and close partnerships between IS and business managers are regarded as important in the bank because this ensures that the parties understand each other's goals and objectives, and can recognize challenges in each other's field of expertise. Furthermore, to ensure continuous communication and close partnerships there are established formal communication structures that are created and maintained between the business and the IS units.

Lastly, participants indicated that most IS plans are carried through to implementation, especially if they are well expressed and monitored throughout their lifecycle. If not well expressed, the implementations tend to be halted along the way mainly because of funding not being made available for those plans. The bank's business structure is flexible and able to evolve in order to accommodate opportunities enabled by new technologies.

6. INTERPRETATION OF FINDINGS

The section presents a conceptualized framework for the improved alignment of IS and business strategies (see Figure 5), based on the findings from data analyzed following the six themes, discussed in the previous section. The

framework is the informed recommendations based on the empirical evidence and what we interpret as ways to improve the alignment of IS strategy with the business strategy.

Conceptual Framework

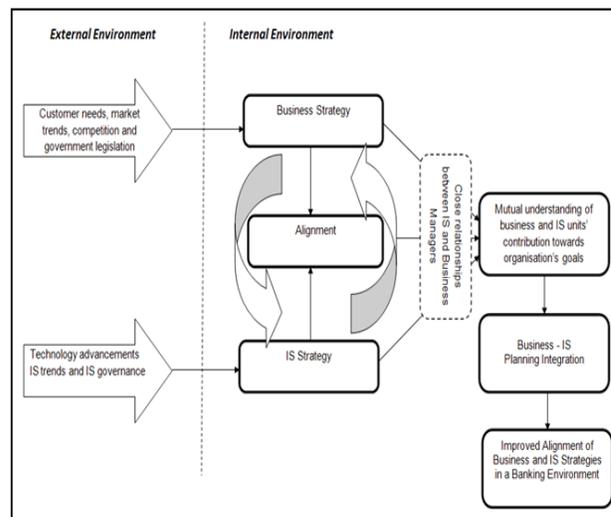


Figure 5: A conceptual framework for the improved alignment of IS and business strategies in a banking environment.

The conceptual framework depicted in Figure 5 shows that business and IS strategies are influenced by the things that happen outside the organization (external environment) such as customer needs, market trends, technology advancements, IS trends, competition and government regulations. It indicates that the organization (internal environment) has to create business and IS strategies that are aligned in order to enable the organization to meet the demands and make use of the opportunities presented by the external environment.

The framework also shows that communication and a close relationship between business and IS management would enable them to work better together and have a mutual understanding of the organization's goals and their contribution towards them; thus making integrated planning between business and IS units possible which in turn will lead to an improvement in the alignment of IS and business strategies in the banking environment.

7. CONCLUSIONS

Based on the challenges outlined in the introduction of this paper, the findings of the research revealed that that business and IS strategies are influenced by external factors. The findings also revealed that, when the business strategy changes, the IS strategy should also adapt in order to support the identified business opportunities because that will minimise the issue of the IS unit implementing systems which the bank argue that they are not value adding and also not translating into tangible profit benefits or increased performances in the bank.

Recommendations

This paper, therefore, recommends that IS unit management should get more involved in business strategy development - because that will lead to them being able to better understand it and to align their IS strategy to the business objectives. The paper further recommends a consistent communication and close relationship between the business and IS managers because that enables them to work better together and to have a mutual understanding of the goals. When IS and business managers mutually understand both the technological systems goals and business direction, their contribution towards those goals is understood; thus making integrated planning towards those goals possible. This integration will lead to improved alignment between IS and business goals. Finally, this paper recommends for the business strategy to be flexible in order to allow for opportunities presented by new systems and technologies to be introduced in the bank.

Future Research

Further research can be conducted, expanding to cover other leading banks in South Africa. Further study can be conducted focusing on the social dimensions of the strategic alignment as well as the impact of business-IS alignment on business performance.

8. REFERENCES

- Agarwal, P. (2012). Information System in Banking Sector: Recognition of Foremost Performance Indicators. *The Indian Journal of Research*, 6(6), 17.
- Alter, A. (2005). *CIOs Shift: Focus is on revenue, not on saving money*. Retrieved from: <http://www.ciainsight.com/article2/0,1540,1875251,00.asp>.
- Almajali, D., & Dahalin, Z. (2011). *Factors influencing IT-Business Strategic Alignment and Sustainable Competitive Advantage: A Structural Equation Modelling Approach*. Retrieved from: <http://www.ibimapublishing.com/journals/CIBIMA/cibima.html>.
- Anderson, J. (2006). *Qualitative and Quantitative research*. Retrieved from: http://www.icoe.org/webfm_send/1936.pdf
- Avison, D., Jones, J., Powell, P., & Wilson, D. (2004). Using and validating the strategic alignment model. *The Journal of Strategic Information Systems*. 13 (3), 223-246.
- Baldwin, C. (1991). *What is the Future of Banking: Rescuing Banks May Mean Reinventing the Banking System*. Harvard Business School, Harvard Business Review.
- Bargiela-Chiappini, F. (2010). *Hyphenated Research*. Forum: Qualitative Social Research, 12(1). Retrieved from: <http://nbn-resolving.de/urn:nbn:de:0114-fqs110122>.
- Basir, H., & NorzaidI, M. (2009). The Effect of Strategic Alignment on Strategic Information System Planning (SISP) Success: An Exploratory Study in Public Universities in Malaysia. *International Journal of Scientific Research in Education*. 2 (2), 76-87
- Benyon-Davies, P. (2009). *Business information systems*, Palgrave Macmillan.
- Bleistein, J. (2004). *Strategic Alignment in Requirements Analysis for Organizational IT: An Integrated Approach*. Paper presented at Asia Pacific Software Engineering Conference, Busan, Korea.
- Bontekoe, R. (1996). *Dimensions of the hermeneutic circle*. Atlantic Highlands, NJ: Humanities Press International.
- Bowman, B., Davis, G., & Wetherbe, J. (1983). Three stage model of MIS planning. *Information & Management Journal*. 6 (3), 11-25.
- Chan, Y. (2002). Why Haven't we Mastered Alignment? The Importance of the Informal Organization Structure. *MIS Quarterly Executive*. 1(2).

- Chan, Y., Sabherwal, R., & Thatcher, J. (2006). Antecedents and outcomes of strategic IS alignment: An empirical investigation. *IEEE Transactions on Engineering Management Journal*. 53(1), 27-47.
- Chung, S., Rainer, R., & Lewis, B. (2003). The Impact of Information Technology Infrastructure Flexibility on Strategic Alignment and Applications Implementation. *Communications of the Association for Information Systems*. 11(1), 191-206.
- Cole, M., & Avison, D. (2007). The Potential of Hermeneutics in Information Systems Research. *European Journal of Information Systems* 16(6), 820-833.
- Das, S., Zahra, S., & Warkentin, M. (1991). Integrating the content and process of strategic MIS planning with competitive strategy. *Decision Sciences Journal*. 22(5), 953-984.
- Earl, M.J. (1989). *Management strategies for information technology*. London: Prentice Hall.
- Galliers, R. (1993). IT strategies: beyond competitive advantage. *Journal of Strategic Information Systems*. 2(4), 283-291.
- Gartlan, J., & Shanks, G. (2007). The Alignment of Business and Information Technology Strategy in Australia. *Australasian Journal of Information Systems*. 14(2), 113-133.
- Gephart, R. (1999). *Paradigms and Research Methods*. University of Alberta. Research Methods Forum, Vol. 4 Retrieved from: http://division.aonline.org/rm/1999_RMD_Forum_Paradigms_and_Research_Methods.htm.
- Hayles, N. (2003). Translating media: Why we should rethink textuality. *The Yale Journal of Criticism*, 16(2), 263-290.
- Henderson, J., & Venkatraman, N. (1993). Strategic alignment: Leveraging information technology for transforming organizations. *IBM Systems Journal*. 32(1), 472-484.
- Issa-salwe, A., & Aloufi, K. (2011). *Integrating Competitive Advantage with Strategic Information Systems Planning: A Review*. 8(1), 2011 Published by Academy of Taiwan Information Systems Research. National Pingtung Institute of Commerce.
- Ives, B., Jarvenpaa, S., & Mason, R. (1993). Global Business Drivers: Aligning Information Technology to Global Business Strategy. *IBM Systems Journal*. 32(1), 143-161.
- Jalava, J., & Pohjola, M. (2002). Economic growth in the New Economy: evidence from advanced economies. *Information Economics and Policy*. 14 (2), 189-210.
- Khanna, A. (2011). *Developments in Banking & Banking Technology*. Retrieved from: <http://www.banknetindia.com/special/itb1.htm>.
- Klein, H., & Myers, M. (1999). *A set of principles for conducting and evaluating interpretive field studies in information systems*. *MIS Quarterly* 23(1), 67-94.
- Kraemer, K., & Dedrick, J. (2001). *Information technology and productivity: results and policy implications of cross-country studies*. In: Pohjola, M. (Ed.), *Information Technology, Productivity, and Economic Growth*. Oxford University Press, Oxford.
- Lederer, A., & Sethi, V. (1996). Key Prescriptions for Strategic Information Systems Planning. *Journal of Management Information Systems*. 13(1), 35-62.
- Luftman, J. (2005). Key issues for IT Executives 2004. *MIS quarterly executive* . 4(2), 269-285.
- Luftman, J., Papp, R., & Brier, T. (1999). Enablers and Inhibitors of Business-IT Alignment. *Communications of the Association for Information Systems*. 1(11), 1 - 33.
- Mocker, M., & Teubner, A. (2005). Towards a Comprehensive Model of Information Strategy. *ECIS 2005 Proceedings*. Paper 62.
- Newkirk, H., & Lederer, A. (2006). Incremental and comprehensive strategic information systems planning, in an uncertain environment. *IEEE Transactions on Engineering Management*. 53(3), 380-394.

- Nickerson, R., Jamie, E., & Ho, L. (2003). An Exploratory Study of Strategic Alignment and Global Information System Implementation Success in Fortune 500 Companies. *Ninth Americas Conference on Information System*. 1683-1688.
- Papp, R. (2004). Assessing Strategic Alignment in Real Time. *Journal of Informatics Education Research*, 6(1).
- Peppard, J., & Ward, J. (2002). *Strategic planning for information systems*. West Sussex, England: John Wiley & Sons.
- Ragin, C., Nagel, J., & White, P. (2004). *Report of the Workshop on Scientific Foundations of Qualitative Research*. Conducted July 11-12, 2003. National Science Foundation: Arlington, Virginia.
- Reich, B., & Benbasat, I. (2000). Factors that influence the social dimension of alignment between business and information technology objectives. *MIS Quarterly*. 24(1), 81-113.
- Onwuegbuzie, A., & Collins, K. (2007). A typology of mixed methods sampling designs in social science research. *The Qualitative Report*. 12(2), 281-316.
- Onwuegbuzie, A., & Leech, N. (2005). The role of sampling in qualitative research. *Academic Exchange Quarterly*. 9(1), 280-284
- Sabherwal, R., Hirschheim, R., & Goles, T. (2001). The Dynamics of Alignment: Insights from a Punctuated Equilibrium Model. *Organizational Science*. 12 (2), 179-192.
- Sebastian K., & Dubravka C. (2010). *Literature Reviews and the Hermeneutic Circle*. Australian Academic & Research Libraries. 41(2), 129-144.
- Simonsen, J. (1999). How do we take care of strategic alignment? Constructing a design approach, Scandinavian. *Journal of Information Systems*. 11(1), 1-12.
- Silvius, A. (2007). Aligning IT strategy to business strategy in a multi business company. *America's Conference on Information Systems (AMCIS)*, Denver.
- Silvius, A., Waal, B., & Smit, J. (2009). Business and IT Alignment; Answers and remaining questions. *Pacis 2009 Proceedings*.
- Teo, T., & King, W. (1997). Integration between business planning and information systems planning: An evolutionary-contingency perspective. *Journal of Management Information Systems*. 14(1), 185-214.
- Ward, J. (2012). Information systems strategy: Quo vadis? *Journal of Strategic Information Systems*. 21 (2), 165-171.
- Whitten, J., Bentley, L., & Dittman, K. (2004). *Systems Analysis and Design Methods*. 6th edition. New York: McGraw-Hill Higher Education. ISBN 0-07-2417-3.
- Voce, A. (2004). *Introduction to research paradigms*. Retrieved from: http://hstrialopenuniversityma.homestead.com/Introduction_to_research_paradigms.pdf.
- Zahra, S., & Covin, G. (1993). Business strategy, technology policy and firm performance. *Strategic Management Journal*. Wiley Online Library

