Jul 2nd, 3:15 PM - 3:30 PM

Business - IT Strategic Alignment Improvement Framework: A Case Study on an Ethiopian Bank

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ABSTRACT

In recent years, the bank sector is heavily relies on IT and has been investing a lot to easily reach their customer and gain the competitive advantages. Unfortunately, due to alignment gap between the business and IT strategy, they were not able to maximize their IT return value. The purpose of this study is finding internal and external challenges that hinders business and IT strategy alignment in the context of an Ethiopian Bank, A. The study conducted as a qualitative case study. The main finding shows that vendor dependency, lack of proper system evaluation, lack of clear national regulation, external changes, lack of expertize on new technology, lack of clear strategy, lack of strategy implementation experience, customer perception on new technology and lack of clear policy and procedures are key internal and external Business-IT alignment hindering factors. Based on the finding, a solution framework has been developed and presented.

Keywords: Business IT Alignment, Strategic Alignment, Business IT Maturity, Strategic Alignment Model

INTRODUCTION

Tremendous evolution of Information System (IT/IS) is changing the current way of business process in various sectors. Recently, IT becomes an essential part of every firm and its role has been enhanced from traditional back office supports to strategic role, and also an impact on business strategy shaping (Henderson & Venkatraman, 1993; Abhijeet & Indra, 2013). As a result, firms have been investing a significant amount of money to leveraging their IT capability to gain competitive advantages over their competitor. Because of this they have been giving attention to IT strategy. Due to this, both information technology (IT) and business leaders are continually looking for management practices to help them align their IT and business strategies (Luftman & Sledgianowski, 2005). Unfortunately, aligning the business and IT became a major challenge for both business and IT managers.

Business-IT alignment (hereafter refer BITA) refers to 'applying Information Technology (IT) in an appropriate and timely way, in harmony with business strategies, goals and needs' (Luftman, 2000). Kearns and Lederer (2000) point out that whenever there is effective alignment of the IT plan with the business plan, it can provide competitive advantage. To the contrary, if the alignment is not properly treated, it can result in potential losses. Thus, to gain sustainable competitive advantages of IT over the competitor, firms must align their business and IT strategy properly. How firms can achieve BITA and maximize the return value of their investment has been a major issue for researchers, academicians and practitioners.

BITA has persisted as top concern for IT managers for almost 30 years, and first or second most important in the last 8 years (Luftman and Ben-Zvi, 2010). As a result, practitioners, academics, consultants, and research organizations have identified "attaining alignment between IT and business as a pervasive problem" (Luftman and Rajkumar, 2007). How to align Business and IT has been a major question; and to answer this question, a lot of alignment models have been proposed by various researchers (Scott Morton, 1991; Henderson & Venkatraman, 1993; Luftman, 2000). But, still alignment is elusive and challenging issue for both the CEO and CIO. As a result of misalignment between business and IT, most firms could not achieve articulated return value form their huge IT investment.

Banking sector is one sector which relies heavily on the performance of IT services and infrastructure, not only to improve their efficiency and gain profit, but also to earn best reputation and maintain it for the future (Khuram *et al*.2014). In Ethiopia, the financial sector has been investing a significant amount of money for strategic base IT solutions to achieve their organizational goals by gaining a competitive advantages over their competitor's. However, as researches shows there is a big BITA gap (Bogale *et al*,

2015). Though factors influencing BITA in organizations have been widely studied, the barriers in achieving BITA in the banking sector of a developing country remain largely unexplored and it has been given little emphasis (Labidi & Lazar, 2016; Ali & Qing Hu, 2012). Thus, the purpose of this study is to address the below specific questions:

- *What are the current key challenges in the Bank to align Business-IT strategy (External and Internal challenges)?*
- *How can the bank improve Business-IT strategic alignment?*

BACKGROUND LITERATURE REVIEW

The Concept of BITA

Since the last three decades the research topic BITA has been addressed by various researchers. And the concept of alignment has been conceptualized in various forms. In (Henderson & Venkatraman, 1993) alignment is seen as a level of fit and integration between the business strategy, IT strategy, business infrastructure and IT infrastructure. In (Reich & Benbasat, 1996) alignment is defined as the degree of agreement between the mission, objectives and plans contained in the business strategy with IT strategy. The leading author Luftman (2000) argued that "BITA refers to applying Information Technology (IT) in an appropriate and timely way, in harmony with business strategies, goals and needs".

BITA Models

For the last three decades the issue with BITA has been studied extensively (Gerow *et al.,* 2014, Luftman, 2017). Consequently, researchers has been developed various alignment models (Scott Morton, 1991; Henderson and Venkatatram, 1993; Luftman, 2000; Maes, 2000). In this study the prominent and mostly influential models has been briefly discussed.

Strategic Alignment Model (SAM)

Strategic Alignment Model (SAM) has been developed by Henderson & Venkatraman in 1993. They pointed out that the potential of IT is enhanced from back office support to business strategy shaping. However, the anticipated return value of IT investment is not achieved. Thus, they have argued that "the inability to realize value from IT investments is, in part, due to the lack of alignment between the business and IT strategies of organizations".

The SAM model (Figure 1) is based on two fundamental building blocks: the strategic fit and functional integration. Strategic fit concentrates on the interrelationship between external and internal domains and functional integration concentrates on integration between business and technology domains.

The four dimensions of SAM are business strategy, IT strategy, organizational infrastructure & processes and I/S infrastructure and processes. Each dimension has its own three components.

They stated that there are three types of integrations among the four dimensions. These are:

1. *Strategic integration:* alignment between external domain that is business and IT strategy.
2. *Operational integration:* alignment between internal domain that is business and IT infrastructures and processes
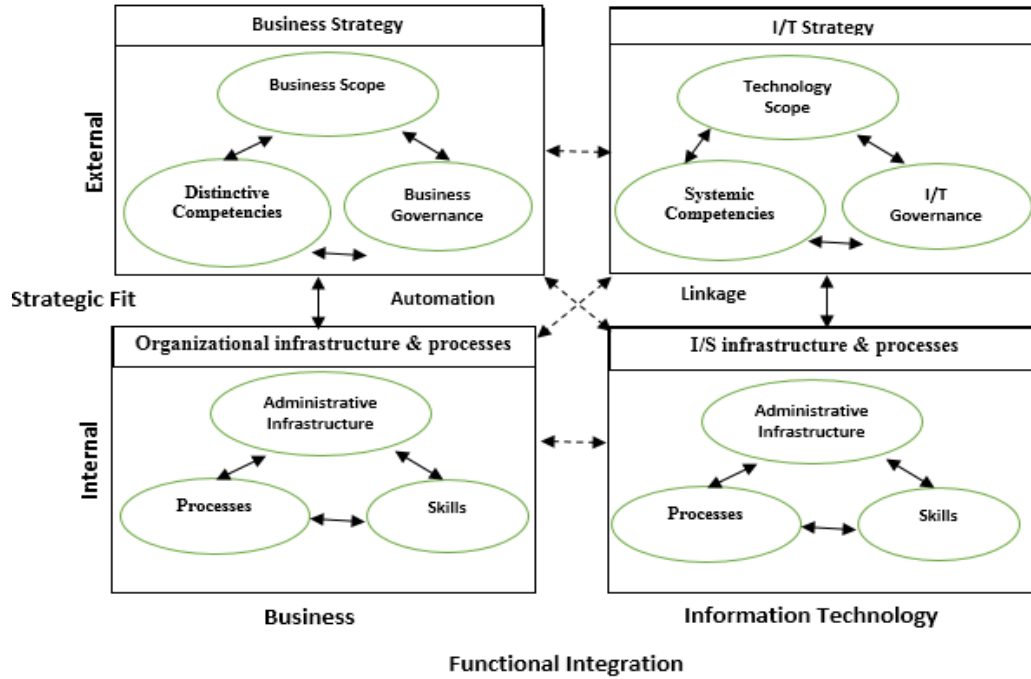3. *Cross-domain integration:* alignment between the four dimensions.

Figure 1. Strategic Alignment Model (Henderson & Venkatraman, 1993)

Strategic Alignment Maturity Model (SAMM)

The most cited alignment model (more than 500 citations at Google Scholar) Strategic Alignment Maturity Model (SAMM) (Table 1) has been developed by the prominent author in alignment Jerry Luftman (Luftman, 2000). The model has addressed a critical question in alignment research how organization can assess their alignment maturity. It has used six criteria to assess the maturity of BITA (see Table 1).

BITA Maturity Criteria	Component's
COMMUNICATION	• Innovation, Entrepreneurship • Locus of Power • Management Style • Change Readiness • Career crossover • Education, Cross-Training • Social, Political, Trusting Environment
COMPETENCY/VALUE MEASUREMENTS	• IT Metrics • Business Metrics • Balanced Metrics • Service Level Agreements • Benchmarking • Formal Assessments/Reviews • Continuous Improvement

GOVERNANCE	• Business Strategic Planning • IT Strategic Planning • Reporting/Organization • Structure • Budgetary Control • IT Investment Management • Steering Committee(s) • Prioritization Process
PARTNERSHIP	• Business Perception of IT Value • Role of IT in Strategic Business Planning • Shared Goals, Risk, Rewards/Penalties • IT Program Management • Relationship/Trust Style • Business Sponsor/Champion

SCOPE & ARCHITECTURE	• Traditional, Enabler/Driver, External
	• Standards Articulation Architectural Integration:
	
	   o Functional Organization
	   o Enterprise
	   o Inter-enterprise
	
	• Architectural Transparency
	• Flexibility Managing Emerging Technology

SKILLS	• Innovation, Entrepreneurship • Locus of Power • Management Style • Change Readiness • Career crossover • Education, Cross-Training • Social, Political, Trusting Environment

Table 1. IT-Business Alignment Maturity Criteria (Luftman, 2000)

Communication: This dimension concentrates on the intensity and quality of knowledge and ideas sharing between business and IT.

Competency / value measurement: This dimension refers to the potential use of metrics to demonstrate the contributions of information technology and the IT organization to the business. The measurement terms shall be understood and accepted by both business and IT (Luftman, 2017).

Governance: This dimension refers to the allocation of authority for IT decisions and the processes IT and business manager's use at strategic, tactical, and operational levels for setting IT priorities, allocating resources, and controlling activities (Luftman, 2017).

Partnership: The dimension refers the level of relationship and mutual trust between the business and IT (Luftman, 2017).

Scope and Architecture: This maturity dimension refers to the continuous process of provisioning a flexible infrastructure, its evaluation, and the application of emerging technologies and delivery of customized solutions to business units and external customers or partners (Luftman, 2017).

Business and IT Skills: This dimension refers to the human resources practices, such as hiring, retaining, training, performance feedback, innovation encouragement, career opportunities, and individual skill development within IT (Luftman, 2017).

Luftman (2000) stated that there are five maturity levels in SAMM these are:

1. *Initial/Ad Hoc Process:* at this level business and IT is not harmonized. It is highly improbable that these organizations will be able to achieve an aligned IT business strategy, leaving their investment in IT significantly unleveraged.
2. *Committed Process:* at this level the organization committed to be aligned. Pertains to the existence of a commitment by the organization to promote IT-business alignment.
3. *Established Focused Process:* refers to the existence of an established alignment process in place that is focused on business objectives. IT becoming embedded in the business.
4. *Improved/Managed Process:* refers to the existence of a strong alignment process that emphasizes the concept of IT as a creator of value for the firm. At this level organization leverage IT assets on an enterprise-wide basis and the focus of applications systems is on driving business process enhancements to obtain sustainable competitive advantage
5. *Optimized Process:* at this level strategic alignment is fully integrated and co-adaptive between business and IT.

METHODOLOGY

For the purpose of this study, the researcher employed qualitative research approach. Furthermore, exploratory case study research process has been applied to seek deep knowledge about Business-IT strategy alignment.

Data Collection

Regarding the data collection method, the researcher used semi-structured interview, various documents, observations, and self-administration. The researcher has developed a semi-structured interview questions based on prominent Luftman (2000, 2017) business-IT strategic alignment maturity model (SAMM).

Interviewees Information

In this study, 14 employees (6 directors, 5 managers and 3 senior officers) of the bank has been purposefully selected from both business and IT side. The employees has been selected from six departments.

DATA ANALYSIS

According to the interview, the main driver of the bank is the business strategy. The aim of the IT strategy is achieving the business goal using the IT capability of the bank. As the interviewees pointed out, although the business strategy and IT strategy are aligned on document during strategy formulation, the practice doesn't show the same.

Case Study Analysis

In the following section, data analysis is presented with the data collected from the interview, observation and various document analysis. The case analysis follows the research questions. Mini database has been developed to store the codified data. Based on SAM model (See Table 3), a thematic analysis was used to analyze collected data. As the finding shows at each themes maturity has been affected by various hindering factors.

Themes	Hindering Factors
Theme-1: Communications	• Lack of understanding what the business need • Lack of knowledge sharing • Lack of understanding the IT capability
Theme-2: Competency/Value Measurements	• Lack of metrics • Lack of demonstrations on IT capability
Theme-3: IT Governance	• Lack of project prioritization and management
Theme-4: Partnership	• Lack of collaboration
Theme-5: IT Scope and Architecture	• Lack of evaluating new technology
Theme-6: IT Skill	• Lack of Skill and Experience

Table 2. Factors that hindering BITA

Internal and external challenges that hinders the BITA

According to the interview, the researcher found the below internal external challenges that deters the BITA of the bank A.

Internal Challenges	External Challenges
• Lack of clear and agile strategy • Organizational structure • Lack of clear policy and procedure • Lack of strategy implementation skill • Lack of skill capability on technology	• Vendor Dependency • National Bank of Ethiopian (NBE) Regulation • Lack of skill on technology • Lack of Infrastructure • Political change • Customer perception on new technology

Table 3. Internal and External Challenges

Proposed Framework to Improve BITA

The researcher has proposed the below conceptual framework (Figure 2) to improve BITA. The framework has been proposed based on literatures and the collected data. As per the findings, the proposed framework has four emphasized components: ***change management, business-IT strategy intervention, organizational culture, and continuous maturity assessment.***
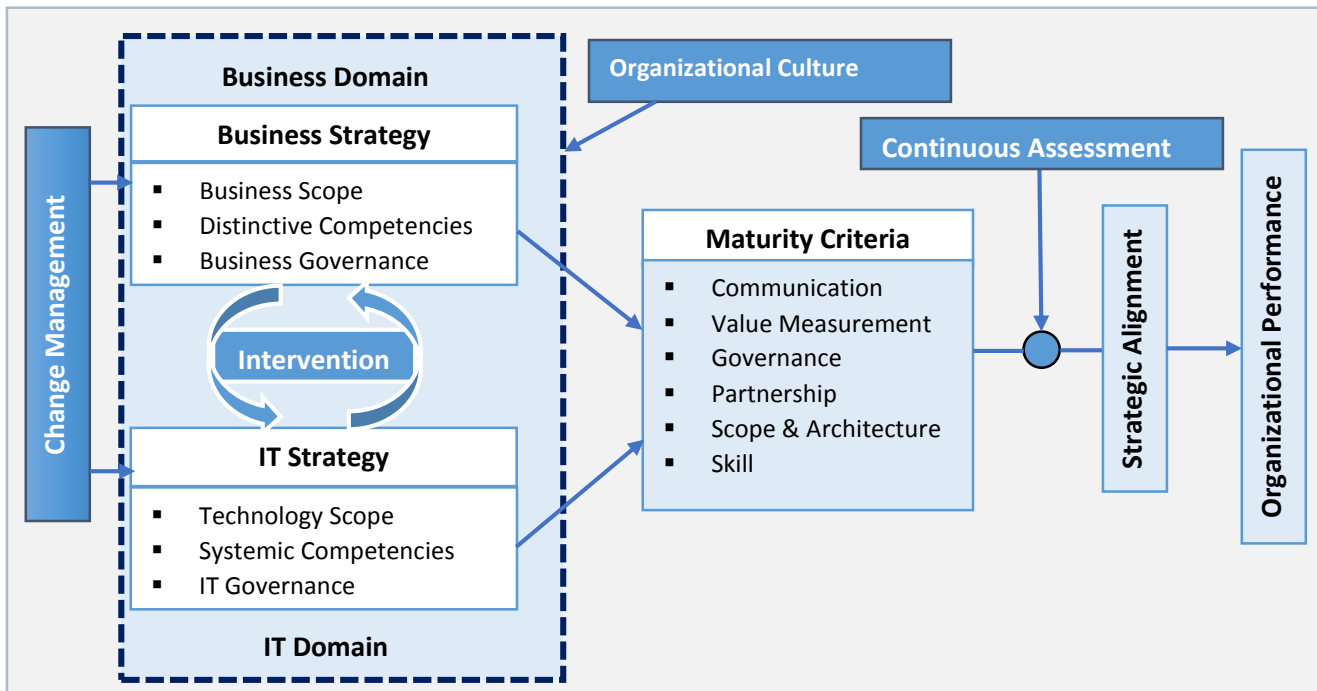
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Figure 2. Proposed Conceptual Framework (Adapting from Henderson & Venkatraman, 1993; Scott Morton, 1991 and Luftman, 2017)

Change Management

To be successful in the current dynamic and uncontrolled business environment, Organizations must have efficient change management capability to manage changes (Norbert *et al,* 2014; Oscar & Kelly, 2014). As Change is inevitable, it can knock organization's door at any given time. Chan and Reich (2007) stated that "The business environment is constantly changing, and thus there may be no such thing as a 'state' of alignment". Change can be environmental or technology. Those changes might be hard to control and it can have an impact on both Business and IT strategy. Thus, to sustain the competitive advantages of the business, wise sense and response to the change is critical. Therefore, to manage any changes from the internal and external environment, change management plays a great role to mitigate their impact on the BITA.

Intervention

The BITA gap starts when strategy is formulating. Hence, to mitigate the gap, during strategy formulation business should know what the IT needs from it, and also IT should know what the business from IT. Nowadays, the business environment is dynamically change. Thus, the intervention between the business and IT should be continuous. Benson et al (2004 p.188) stated that, IT is now expected to add value to the enterprise not only by responding to business requests but also by creating business opportunities through the innovative combination of IT capabilities with customer needs and requirements. Hence, to gain competitive advantages of the technology or marketing arena opportunity business and IT intervention should be contentious. This continuous intervention enhances current IT back office support to a strategic partnership and coherent interrelation between the business and IT unit.

Therefore, during business strategy formulation IT strategy must be consider. In the future IT will be the driver of the business. It means that IT strategy will opportunity maker for the business strategy. Thus, during business strategy formulation process the IT involvement is essential, and also during IT strategy

formulation process the business involvement is also essential. In addition to this, to adapt agility and to quick response to any change this intervention is important.

Involvement of business management in IT strategy formulation which can impact the overall ownership of that strategy; alignment of the IT strategy with business objectives; and responsibility for delivering business benefits (Peppard and Ward, 1999).

Organizational culture

Organization culture is very critical alignment precondition (Coltman et al., 2015). And a supportive organizational culture is required to establish a strong working relationship between the business and IT functions and achieve successful alignment (Abhijeet & Indra, 2013). From the interview, the researcher found that shared organizational culture is an essential part of BITA. Here organizational culture is referred to the perception of the bank employee to the core values. In addition, this organizational culture will include:

> ➢ Knowledge sharing between the business and IT
> ➢ Readiness to internal and external change
> ➢ Perception of employee to use new technology

Maturity Assessment Process

The main advantage of maturity assessment is identifying the hindering problems and address those problems to improve BITA. Based on the collected data analyze, strategy implementation is challengeable task to the bank. For instance, during both strategy formulation IT was intended to be strategic partner of the business. But, even if the bank has been invested a lot of many, still IT is back office supporter of the business .Thus, maturity level assessment is critical to be know the alignment level and to improve it by knowing the gaps.

If the maturity is low means there is high alignment gap between the business strategy and IT strategy. Thus, to mitigate this gap and enhance BITA maturity business and IT executives must continually reassessment the gap and take an action to fill the gap. BITA is not one time event rather it is a process of change over time and continuous adaptation (Henderson and Venkatraman, 1993).

Maturity assessment process adopted from SAMM (Luftman, 2002, 2017). It has six criteria and 39 items (see Table 1). The bank could be add important attributes on each criteria and remove unimportant attributes. For instance critical attribute will be service level agreement (SLA) between service provider and vendor. Thus, depend on the criticality the bank will add and remove attributes on each assessment dimensions.

To sustain the alignment and to gain appropriate IT investment return value the assessment should be continuous and the result should present to the top management.

CONCLUSION

BITA is not silver bullet rather it is a continuous process and affected by various internal and external influential factors. Based on the key findings the researcher concluded that:

> ➢ Systems vendor dependency is a new influential factor in this research as a developing country like Ethiopia. Especially, strategic solution needs adequate and timely support to use IT capability effectively and efficiently. Most of Ethiopian banks are using the same solution (core banking and payment solution) and they depend on the same vendor. Thus, this influential factor may affect those banks BITA also.

- ➢ National Bank of Ethiopia (NBE) regulation on technologies also another influential factor that affect BITA. Ethiopian banks have been adopting various technologies to enhance their competitiveness. However, due to NBE regulation they could not use those technologies easily.
- ➢ Changes also another factor that affect BITA. These changes may come from the internal or external environment. But on this study changes especially from the external environment like regulation and political change hampering BITA.
- ➢ Lack of system evaluation skill also another influential factor that affect BITA. As a result, malfunction products are reached on customer hand. When the customers are using this malfunction technology they lose their confidence on that technology.
- ➢ Some new technologies are need further investigation by some government body before implementing the technologies to achieve the business goal. Unfortunately, if those technologies are new to that investigator body, banks could not implement that technologies until they get approval from that body.

RECOMMENDATIONS AND FUTURE WORK

To enhance BITA and maximize IT investment value the researcher recommends the following practical recommendations:

- ➢ Strong vendor management
- ➢ System Existing Strategy
- ➢ Awareness Training on BITA
- ➢ Knowledge Sharing Platform
- ➢ Clear and known policy and procedure
- ➢ Change Management
- ➢ Established maturity assessment team

Although BITA has been addressed by various researchers, still it has been challengeable issue for both business and IT management. For the future researcher the researcher has recommended the proposed framework is needs more improvement; and also detail evaluation.

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