BUSINESS-IT ALIGNMENT IN THE BANKING SECTOR: A CASE FROM A DEVELOPING COUNTRY

Research full-length paper

Track N° 7 – Management, Governance & Portfolio Management of Digital Projects

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Abstract

Business-IT Alignment (BITA), one of the widely explored topics in the IS research domain, remains to be challenging. The extant literature provides a long list of factors that need to be managed appropriately to achieve and maintain BITA. Among other things, both the intra-organisational as well as external factors, are found to determine whether organisations succeed to achieve BITA or not. However, previous BITA studies have been criticised for focusing on investigating a few industries and contextual factors in developed countries. This case study is aimed at addressing the lack of BITA studies in developing countries. The data was collected at a bank in Ethiopia through interviews with business as well as IT leaders. The study employed thematic analysis, which revealed several barriers to BITA. Business and IT leaders may find the result of the study invaluable to plan activities that might overcome BITA barriers and improve BITA maturity.

Keywords: Business-IT Alignment, Strategic Alignment, Banking Sector, Antecedents, IT Governance, Developing Country.

1 Introduction

In the course of the past four decades, organisations have come a long way in recognising the vital role of Information Technology (IT) and how it has become an inseparable part of their overall business processes (Cline and Guynes, 2001). The literature provides several accounts of the decisive role of IT in improving the overall organisational performance and realising the business value (Chan and Reich, 2007; Henderson and Venkatraman, 1993). Even though the use of IT has been found to contribute to the performance of organisations, this development has also required organisations to be mindful of the challenges of managing IT in such a way that it contributes to the achievement of the overall organisation objectives. This has brought the issue of strategic alignment, also referred to as business-IT alignment (BITA) to the fore. Since the publication of the first article (Henderson and Venkatraman, 1993) articulating the phenomenon, the alignment between the business strategy and the strategic choices of IT deployment has remained an important research topic in the IS domain. However, according to Luftman and Brier (1999), the critical role of BITA for organisations has already been recognised since the late 1970s.

The continued interest in BITA among researchers in the IS and related research domains is justified, given its relationship with improved organisational performance (Kafi and Kalika, 2005). Review of

the literature indicates that the goal of BITA studies converges into three categories (Luftman, 2000; Reich and Benbasat, 2000; Rusu and Jonathan, 2017). The first set of studies are set out to develop and present BITA construct. Others attempt to develop ways of assessing BITA. The remaining studies focus on identifying the internal and external organisational factors, also referred to as the enablers and inhibitors of BITA. However, despite the extensive empirical and conceptual studies, achieving and maintaining BITA remains to be challenging. The debate among practitioner outlets also seems to suggest the importance of BITA for many organisations. One of the most comprehensive IT trend studies conducted across industries in 793 companies (Kappelman et al., 2019) reveals that BITA has been consistently ranked to be among the top three concerns for IT executives for many years in a row.

Even though researchers are credited for the extensive BITA studies in the past three decades, Karpovsky and Galliers (2015) argue that most of these studies disproportionally dwell on conceptual debates while practical issues that could have helped organisations to achieve and maintain BITA are minimally attended. Empirical studies, on the other hand, are criticised for focusing on a few environmental contexts. For instance, most of the BITA studies are conducted in developed countries and few sectors (Jonathan and Rusu, 2018; Rusu and Jonathan, 2017; Yayla and Hu, 2009). Thus, Panda and Rath (2018) caution against generalising based on BITA studies from developed countries due to the structural and cultural variations between the developed and developing countries. Dedrick, Kraemer and Shih (2013) also found a disconnect between developed and developing countries in terms of the value derived from IT. Even though the availability of resources is cited as the primary source of this discrepancy, evidences suggest that country factors such as the cost and level of IT infrastructure, the level and availability of human capital, the dynamism as well as the openness of economy are found to determine how organisations manage IT and configure other resources (Dewan and Kraemer, 2000; Yayla and Hu, 2009). The choices in IT management practices and the application of resources to achieve the overall organisation goal is what determines BITA and its maturity (Chan, 2002; Luftman et al., 2017). The findings of studies investigating BITA in developing countries (e.g., Burkina Faso, India, Nigeria, and South Africa) also indicate that the intra-organisational barriers to BITA are related to such environmental factors as the availability of competent IT service providers, skilled IT personnel, as well as dependable IT infrastructure (Gbangou and Rusu, 2016; Jonathan et al., 2018a; Kekwaletswe and Mathebula, 2014; Singh and Desai, 2013). This paper, therefore, is set out to explore the intra-organisational barriers to BITA in Ethiopia as a developing country. In line with the objective of the study, the following research question is formulated:

What are the intra-organisational barriers to business-IT alignment for an organisation in a developing country?

The remainder of the paper is structured in five sections. First, a brief literature review of the extant BITA studies is presented. Section 3 discusses the methodological approach—the research strategy as well as data collection and data analysis methods along with the justification for the choices. Section 4 discusses the findings of the study. The final section presents the conclusion, limitations, as well as suggestions for future research.

2 Background

IT is credited to have improved the efficiency of business processes and communication between different business units as well as between partner organisations (Cline and Guynes, 2001). Firms also claim to have reduced their costs, production and service delivery time, and human errors when they gradually introduce IT in their work. However, there is evidence suggesting, despite substantial investments in IT, many organisations fail to achieve the anticipated performance improvements. The lack of BITA is often cited to be the reason for these organisations' failure in their attempt to derive value from their IT investment (Chan and Reich, 2007; Coltman et al., 2015).

2.1 Business-IT alignment (BITA)

BITA, despite extensive research and a large volume of literature in the past decades, remains to be an interesting but a challenging endeavour for practitioners and researchers. A closer look at the academic literature indicates that BITA has been conceptualised and defined differently by different authors. Some of the common terms used in the literature include: '*fit*' (Venkatraman, 1989), '*linkage*' (Henderson and Venkatraman, 1993), '*fusion*' (El Sawy, 2003), and '*integration*' (Weill and Broadbent, 1998). The breadth of definitions also varies in the literature. For instance, BITA is broadly defined as "*the fit between an organisation and its strategy, structure, processes, technology and environment*" (Kanellis, Lycett and Paul, 1999, p. 66). Other definitions are more focused (Chan, 2002). For instance, Shams and Wheeler (2001), describe BITA as the convergent intentions, shared understanding, and coordinated procedures within an organisation encompassing both IT and business domains. However, according to the widely accepted definition (Reich and Benbasat, 1996, p. 56) BITA refers to "the degree to which the IT mission, objectives, and plans support and are supported by the business mission, objectives, and plans". Regardless of the differences in the definitions and terminologies in the literature, Chan and Reich (2007) argue that there is a consensus among researchers that the aim of BITA is the efficient use of IT resources with the ultimate goal of creating added value for an organisation by aligning the IT strategies with the overall organisational strategies.

Coltman et al. (2015), finds a broad consensus among IS scholars in two areas. First, researchers investigating BITA in different industries and contextual settings have found that there is a positive relationship between BITA and overall organisational performance. Second, the antecedents of BITA remain to be similar in many organisations. For instance, Communication, relationship between business and IT leaders, shared understanding between IT and business personnel, support from leaders, competency of leadership, organisational structure, and commitment are found to determine organisations' success to achieve and maintain BITA (Jonathan, 2018; Luftman, 2000; Chan and Reich, 2007). Yet, the extant literature fails to present a unified view and conceptualisation, which can be adopted to operationalise BITA in different contexts. Luftman et al. (2017), for instance, argue that the growing body of literature has only brought more constructs for conceptualising and measuring BITA with less coherence resulting in contradictory empirical findings. According to Coltman et al. (2015), a multidimensional view of BITA, which is acknowledged but not well-agreed among researchers needs to be debated to further our understanding of the phenomenon. Reich and Benbasat (1996) argue that BITA should be studied using the two-dimensions lens (i.e., social, and intellectual). The social dimension helps us to assess how well the business and the IT leaders within an organisation can understand the 'mission', 'objectives' and 'plans' of both units. This dimension also reveals the strengths of the commitment of the leaders. The intellectual dimension of BITA, however, is concerned with examining the existence of 'high quality' and 'inter-related' plan transcending the IT and business domains. Other studies (for instance, Chan, 2002) argue that the two-dimensional view is not sufficient. According to the author, multiple sets of components of BITA (structural, strategy, and culture) need to be assessed and studied simultaneously at different levels within an organisation (at unit levels or in the whole organisation). Several conceptual and empirical studies are still being carried out to address the different BITA maturity levels within an organisation (for instance, Chan, 2002; Gutierrez and Lycett, 2011).

2.2 Strategic alignment maturity model (SAMM)

The first Strategic Alignment Model (SAM) proposed by Henderson and Venkatraman (1993) is credited to be the starting point for the number of models that followed. There are two common justifications provided in the literature for each of the models expanding or operationalising SAM (Gerow et al., 2014). First, SAM, is known to be purely conceptual, making it insufficient to analyse and assess BITA in practice. Second, the fact that BITA is contingent upon different contextual factors, for instance, organisational structure, types of strategy, organisational culture, and IT governance (Coltman et al., 2015; Reich and Benbasat, 1996) requires different approaches towards reaching and assessing

BITA. However, according to Luftman et al. (2017), most of the BITA models, which are often specific to one industry, are not grounded in strong theories. Hussin et al. (2002) also argue that the BITA models in the literature view BITA as a static position and fail to provide measures that can help organisations reach BITA. This study adopts the strategic alignment maturity model (SAMM) presented in Figure 1. The SAMM (Luftman, 2000; Luftman et al., 2017) is constructed along six different dimensions with several attributes that are found to improve BITA. The model is chosen because it addresses the shortcomings of other models, which focus on particular aspects of BITA, such as social alignment or structural alignment in specific industries. Moreover, SAMM is validated by a survey of organisations across 16 different industries (Luftman et al., 2017).

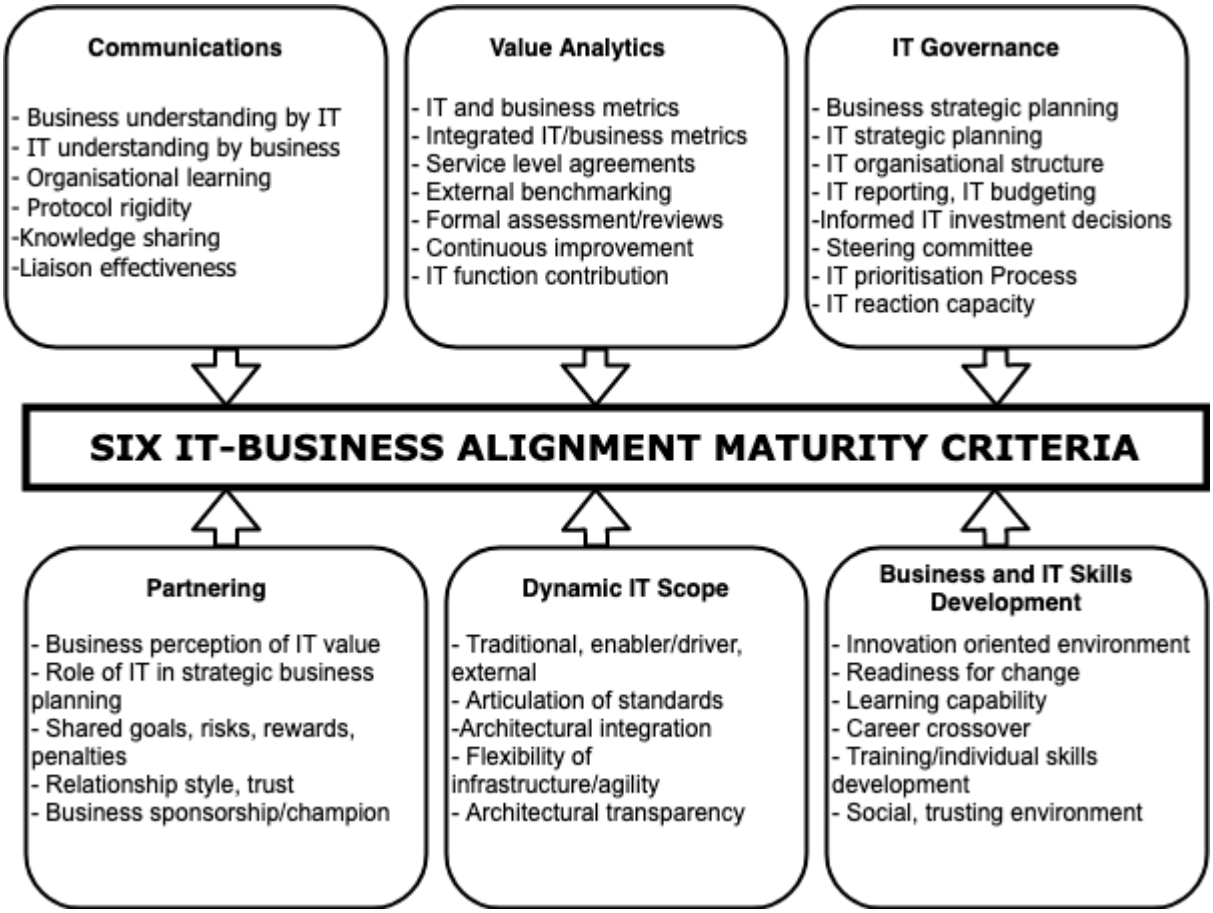

Figure 1. Strategic Alignment maturity Model (Luftman, 2000, p. 12; Luftman et al., 2017)

As shown in Figure 1, the six dimensions of BITA capture the "scope and the level of activities through which the IT function and business functions engage to enable or drive the firm's business value-adding activities when IT is recognised as a necessary component" (Luftman et al., 2017, P. 31). These dimensions are communications, value analytics, IT Governance, Partnering, Dynamic IT Scope, and Business and IT skills development.

Communication refers to how business and IT personnel exchange ideas, information and knowledge. The significance of smooth communication between the IT and business domains is established in the literature. For instance, Reich and Benbasat (2000) argue that good communications are found to result in the integration of IT and business plans, which in turn have a favourable influence on BITA. ***Value Analytics*** refers to how organisations use metrics to measure the contribution of IT in such a way that it is understood and accepted by both IT and business. The collaboration of both domains is

necessary to come up with analytical tools that can provide comprehensible measures (Luftman, 2000). The third BITA dimension, ***IT governance*** refers to how the IT decisions are made in an organisation. Appropriate IT governance activities are essential not only to establish the value of IT but also to make well-articulated IT investment decisions. The relationship between effective IT Governance arrangements and BITA is one of the widely researched sub-topics (Rusu and Jonathan, 2017; Jonathan and Rusu, 2018). The level of relationship between IT and business is referred to as ***Partnering*** in SAMM. Partnering relationship contrasted to a 'customer-client relationship' between business, and IT was found to be critical for BITA (Rathnam, Johnsen and Wen, 2005). A partnership is considered to be strong when, for instance, the important role and contribution of IT is acknowledged by the business. Partnership often helps to create realistic expectations, results in mutual trust as well as the sharing of risks and rewards (Luftman et al., 2017; Reich and Benbasat, 2000). ***Dynamic IT Scope*** assesses how well organisations provide a flexible and adaptable infrastructure capable of accommodating standardised, customised as well as new and emerging IT solutions (Luftman, 2000). The last dimension, ***IT and Business Skills Development***, is concerned with human resources practices. Skill development is critical since the success of organisations in having robust human resources determines how well the other BITA dimensions—communication, value analytics and partnering—are kept in check (Luftman et al., 2017). The extant literature indicates the positive relationship between appropriate human resources and BITA (Luftman et al., 2017; Yayla and Hu, 2009).

In collaboration with the business and IT units, SAMM is used to assess BITA maturity and identify the areas that need to be addressed. An organisation is placed at one of the five BITA maturity levels (i.e., initial/ad-hock process- level 1, committed process- level 2, established focused process- level 3, improved/managed process- level 4, or optimised process- level 5) based on how well it has managed the six dimensions. The BITA maturity level is the average of the sum of the score of the six dimensions which are assessed using a 1 to 5 Likert scale. The scores are assigned for the set of attributes in each of the BITA dimensions as shown in Figure 1, "*where: 1 = does not fit the organisation, or the organisation is very ineffective, 2 = low level of fit for the organisation, 3 = moderate fit for the organisation, or the organisation is moderately effective, 4 = fits most of the organisation, and 5 = strong level of fit throughout the organisation, or the organisation is very effective*" (Luftman (2000, p. 21). Organisations at ***level 1*** are characterised by their low level of understanding between the business and IT domains as well as ad hock knowledge sharing and organisational learning. At ***level 2***, organisations have begun the process of BITA maturity by bringing the IT and business units together. BITA maturity of ***level 3*** indicates strong governance, processes and communications towards specific business objectives. The organisation is in its early stage in implementing business applications to cover the whole organisation. At ***level 4***, organisations are considered to have demonstrated successful management of all of the six dimensions of BITA. Organisations at ***level 5*** have reached optimal BITA maturity characterised by sustained governance processes that integrates the IT strategic planning process with the strategic business process.

2.3 Intra-organisational factors influencing BITA

Chan and Reich (2007) argue that various intra-organisational factors play important roles as organisations attempt to reach optimal business and IT aligned positions. The difference in organisational contexts also means that there might be inherent differences and various possible ways towards reaching BITA in different organisations. Luftman (2000, p. 2) argues that "*achieving and sustaining alignment demands focusing on maximising the enablers and minimising the inhibitors that cultivate alignment*". Empirical studies have identified the benefit of acknowledging the various factors that have an influence on BITA. For instance, there is a broad consensus among researchers that organisations that recognise the critical role of a clear communication between the business and IT domains are likely to score high on BITA (Chan and Reich, 2007; Luftman and Brier, 1999; Reich and Benbasat, 2000; Wagner, Beimborn and Weitzel, 2014). Communication is also found to affect other related factors that are necessary for organisations to reach BITA or improve its maturity. These include business/IT

partnership (Luftman, 2000; Luftman and Brier, 1999; Wagner and Weitzel, 2014), commitment (Hussin et al., 2002), domain knowledge (Chan and Reich, 2007; Wagner et al., 2014), and IT/business metrics (Gbangou and Rusu, 2016; Luftman et al., 2017). Review of the extant literature also suggests that leaders' support of IT contributes to improving BITA maturity (Jonathan et al., 2018a). In the same vein, IT governance arrangements are found to influence BITA (Jonathan and Rusu, 2018; Luftman et al., 2017; Rusu and Jonathan, 2017). For instance, Luftman and Barrier (1999) argue that the steps organisations take demonstrating the priority given to IT by creating IT leadership positions is associated with improved BITA maturity. The importance of a good relationship between business and IT leaders is also recognised (Reich and Benbasat, 2000; Wagner et al., 2014). Moreover, BITA is influenced by organisational structures in place (Chan, 2002; Jonathan, 2018, Jonathan, Rusu, and Perjons, 2018), and previous IT implementation success (Chan and Reich, 2007; Jonathan et al., 2018a).

3 Research Methodology

Review of the literature indicates that there is a lack of empirical studies that explore the different contextual factors that influence BITA. According to Luftman (2000), it is in organisations best interest to maximise the factors that enable BITA while minimising those that hinder its achievement. Following the recommendation of Karpovsky and Galliers (2015), this study attempts to explore the barriers to BITA in an organisation from a developing country. The following paragraphs discuss the research strategy as well as the data collection and analysis methods.

3.1 Case study research strategy

A case study research strategy is chosen for this study. Case studies, which are the most widely adopted research strategies among IS scholars, are also found to be the first choice for many BITA studies (Chan, 2002; Jonathan et al., 2018b; Rusu and Jonathan, 2017). Besides, the choice of case study is justified as the research is set out to investigate different intra-organisational factors related to BITA. The study is aimed at looking into the interaction between employees in different units—IT and other departments. According to Yin (2014), case studies are appropriate when the interest is to study complex issues that involve multiple actors, processes and goals without altering the characteristics of real-life events. Denscombe (2014) also states the benefit of case studies in providing an in-depth account of relationships, experiences and processes in a specific setting.

3.2 Data collection and analysis methods

One of the primary merits of a case study as a research strategy is that it provides a researcher with the option of introducing different data collection methods. The adoption of different data collection methods (sources of evidence) helps to demonstrate the rigour and credibility of findings (Denscombe, 2014; Yin, 2014). This study primarily relies on interviews for data collection. Yin (2014) argues that interviews are helpful to capture people's insights, opinions and experiences in detail. For this study, the interviews provided an explanation of how leaders in the IT and other departments describe different organisational factors that could enable or hinder BITA. Internal organisational documents, web posts, annual reports and other publicly available materials complemented the data collected through interviews. This use of different sources of data is found to result in relatively more solid, reliable and diverse construction of realities—a phenomenon referred to as triangulation (Yin, 2014). The data for this study is collected in one of the private banks in Ethiopia, which will be referred to as 'Company A'. The banking industry is chosen as it is considered to rely on the use of information technology due to the need for intense information-processing to deliver services to its customers (Wagner et al., 2014). The selection of respondents was based on non-probability sampling strategy with consideration for their availability and potential of providing useful data that could help in answering the research question (Denscombe, 2014).

The interviews were carried out in two rounds. The first round of interviews was conducted with the help of the interview guide formulated using the literature review. The analysis of the data collected from the first round of interviews was helpful for two reasons. First, the interviews provided the researchers to familiarise themselves with Company A. Second, the data also is instrumental in formulating the second-round semi-structured interviews. Moreover, the initial interviews were also intended to help interviewees familiarise themselves with the aim of the study. The full list of interviewees is shown in Table 1.

Code	Position	Domain	Interview duration in minutes	
			Structured	Semi-structured
D-1	Director, Finance Department	Business	120	90
D-2	Director, Facility Management Department	Business	110	90
D-3	Director, Personal Business Banking Department	Business	112	85
D-4	Director, Corporate and Institutional Banking Department	Business	120	90
D-5	Director, Risk and Compliance Management Department	Business	115	80
D-6	Director, Knowledge and Innovation Department	Business	120	90
D-7	Director, IT Project Department	IT	120	90
D-8	Director, Core Banking and Software Development Department	IT	120	90
D-9	Vice President, Information Technology	IT	120	90
D-10	Director, Multichannel Banking Department	IT	120	90
M-1	Credit Appraisal Division Manager	Business	120	90
M-2	Customer Relations Manager	Business	120	90
M-3	Monitoring and Follow-up Manager	Business	120	90
O-1	Monitoring and follow-up Officer	Business	120	87

Table 1. List of respondents and their official roles.

In total, 28 interviews were conducted with ten directors (six from the business side, four from the IT department) between January and March 2018. The list of respondents also included three managers and one officer from the business side. The number of respondents was instrumental in having proportional representation from the IT and business domains according to the sizes of each of the departments. On average, the first round of interviews lasted for 120 minutes, while the follow-up interviews were about 90 minutes long.

The analysis of the transcribed interviews was done thematically. Thematic analysis is one of the most widely-used qualitative analysis methods known to provide flexibility to a researcher (Roulston, 2001). The method is not tied to a particular theory and epistemology, making it appropriate for case studies (Yin, 2004). The 6-phase guide for thematic analysis as proposed by Braun and Clarke (2006) was used to identify and analyse patterns revealing the different intra-organisational barriers to BITA.

4 Results and Discussion

4.1 The case organisation and its BITA maturity

The case organisation, company A, is a commercial bank in Ethiopia. It is considered to be one of the most technologically enabled banks serving both private and corporate customers. Company A is structured in 19 departments. The banks IT department, headed by the vice president of IT, serves the whole organisation. Unlike similar banks in the country of more than one hundred million, company A

operates only from sixteen branches while heavily investing in increasing accessibility through the deployment of improved online and mobile banking solutions. The company report released at the end of last year also indicates that the bank has implemented a new organisational structure. Company A, according to the publicly available reports, is working on formulating a new strategy for IT and human capital.

The result of the analysis of the data collected indicates that the overall BITA maturity of Company A currently stands at level 1 according to SAMM scale, with the overall average score of 1.68. A closer look at the result shows that company A scores under 2 .0 of the maximum value of 5.0 on all of the BITA dimensions— value analytics (1.65), communication (1.62), partnership (1.55), and dynamic IT scope (1.5). The bank scored lowest on business and IT skills development (1.33) while the highest point is for IT governance, which stands at 2.44. According to the BITA maturity scale based on SAMM, company A has begun the steps to recognise the need for commitment to start the process of BITA maturity. The BITA maturity at the bank is less than the average score of 2.0 for most companies (Luftman, 2000). The average figure in the financial sector stands at 2.9 (Luftman and Kempaiah, 2007). The following paragraphs discuss the identified factors found to influence BITA at company A categorised under the six BITA dimensions.

4.2 Communication

The important role of communication between the business and IT departments to realise BITA is one of the common findings in the extant literature (Chan and Reich, 2007; Luftman and Brier, 1999; Reich and Benbasat, 2000; Wagner et al., 2014). Communication is also recognised to be invaluable in creating a trusting and partnership-oriented relationships in an organisation. The responses from the interviewees seem to suggest there is a lack of sufficient understanding between business and IT at company A. According to most of the directors from the business side, the IT department has only limited knowledge about the bank's business. In one of the director's own words, "*Those in the IT department do not understand business at all. The communication protocol we have is not that much of help. The communication between business and IT is one-way, coming only from us. I can also say that the knowledge sharing between us is at ground level*" (D-1). It was interesting, however, to note that there were other respondents in the business side acknowledging business understanding of IT at some level (for instance, D-4). On the other hand, one of the IT directors (D-9) also agrees there is a lack of business understanding among the IT personnel. The perception of leaders regarding the knowledge sharing arrangement in place to address the lack of understanding is varied. Even though two of the respondents (D-6, D-9) consider the knowledge sharing between IT and other departments is 'structured well', most of the remaining leaders find organisational learning problematic. For instance, the effectiveness of the liaison and the communication protocol is debated. According to SAMM, company A seems to have a long way to address the factors that hinder smooth communication between IT and business.

4.3 Value analytics

As discussed earlier, the strategic role of IT in improving the overall organisational performance and realising business value is acknowledged (Chan and Reich, 2007; Henderson and Venkatraman, 1993). However, IT leaders in many organisations are struggling to demonstrate the value of IT. Consistent with a similar study by Gutierrez and Lycett (2011), the responses from the participants show that IT is seen as an additional cost at company A. A closer look at the responses suggest that the lack of agreedupon metrics to measure the contribution of IT to the overall output of the bank might be one of the reasons. As one of the directors puts it "*we don't have a formal method to measure the actual contribution of IT to business. The only assessment we do is by looking at the responses from customer surveys*" (D-4). Another respondent from IT says "*our department formally measure value based on the contribution to our customers. We have formal feedback processes in place to review and take action based on the results of our measures. And to assess contributions across functional organisa-*

tions". However, respondents from the business side claim that the contribution of IT to the overall business performance is weak. It is interesting to see that opinions are formed regarding IT's value with little agreement on how assessments are done. According to Luftman et al. (2017), organisations with effective business and IT metrics are likely to succeed in their attempt to reach BITA. The result of the analysis, according to SAMM, suggests that both IT and business at the bank need to move away from the ad-hock informal evaluations towards consistent and formal metrics. The service level agreements in place also need to be revised with participation from both sides.

4.4 Partnering

BITA is likely to be reached in organisations where IT is recognised as a partner (Luftman et al., 2017; Reich and Benbasat, 2000). The level of understanding between the two domains at the bank is known to influence the business/IT relationships. The other attribute to a partnership that is found to be troubling and associated with BITA is the perception of IT value at company A. The respondents from both sides (D-1, D-9, D-10) state that IT is seen as a cost of doing business at the bank. As D-9 puts it "*IT doesn't have any role to shape new business strategies. Rather IT department's task is delivering services to the business departments*". This view is shared by other respondents on the business side as well. For instance, even though the business side considers IT to be an important asset for the delivery of services to the bank customers, it is not considered as an equal partner (D-1, D-6). The participants from the business side also express their mistrust and frustration with IT. A closer look at the responses seem to suggest a perceived lack of business understanding by IT staff and capture the IT needs of the departments; inefficient use of IT personnel for the right task; and IT's lack of good judgement on business priorities have contributed to the unfavourable relationship between IT and the remaining departments (D-4, D-6, M1). On the other hand, the participants from the IT domain acknowledge the need for work towards improving the relationship they have with the business. However, they see two main reasons for the tension (D-7, D-9). First, even though the IT initiatives have always had the C-level sponsorship and are executed according to the requirement from the functional units, the business side is not doing all it can to exploit the delivered IT solutions. Second, even though the business requirements come from the business, IT is expected to take all the risks. The results, according to SAMM, suggest that company A needs to improve the relationships between IT and business. BITA is likely to be reached when IT is recognised as an equal partner to business sharing the goals, risks and rewards.

4.5 IT governance

Several empirical and conceptual studies have shown that effective IT governance is instrumental in organisations' journey toward BITA (Jonathan and Rusu, 2018; Luftman et al., 2017; Rusu and Jonathan 2017). One of the antecedents of BITA widely acknowledges the presence of executive-level IT leadership position which is also found to be the case at company A. The result of this study shows that company A's highest score (2.44) comes from the IT governance dimension. However, most of the participants (the business leaders) are not familiar with the IT governance arrangement. As far as they are concerned, the IT decision making authority is the responsibility of corporate leadership (for standard and shared IT services), and each of the departments makes the decision regarding IT to meet their particular business needs (D-1, D-4). The IT leaders, on the other hand, argue that there are different IT governance mechanisms in place to make better IT investment decisions. For instance, D-7 and D-9 mention the steering committee as an example. The bank is currently in the process of implementing COBiT. When asked about the business and IT strategies, and how these strategies are planned at the bank, the response from the participants seems to indicate a lack of coordination. The findings of previous studies are clear about the importance of joint participation in strategic planning (Chan, 2000; Luftman 2000). However, even though the respondents agree there is one corporate strategy outlining the overall plan for the bank, they are not aware of the planning process. For instance, IT, as one of the departments, is mandated to formulate its own (sub)strategy. According to the

IT director, "*as the IT director, I have designed IT sub-strategy with my own will. And I already distributed and presented this IT sub-strategy to all departments' directors. But they don't have given attention to it. … So, what I have seen from my practical experience is that most of us are working without a stable strategy. We are working just like a fire brigade to work when some problem arises*" (D-10). On the other hand, three directors, one from the business and two from the IT department, recognise the need for better collaboration in business and IT strategic planning (D-6, D-7, D-9). According to the evaluation based on SAMM, company A seems to have acknowledged the importance of good IT governance to reach BITA.

4.6 Dynamic IT scope

The second-lowest score of the six BITA dimensions at the case company is for the dynamic IT scope (1.5). Consistent with the discussion in the previous sections, the respondents are keen to point out a lack of responsiveness and transparency of the IT architecture. The business directors recognise a dynamic business environment in the banking industry, which also resulted in a constant change at company A. According to the participants (D-1, D-4, D-6), the changes in the business units are transparent. This view is also agreed by one of the IT directors to some degree (D-7). However, the IT department acknowledges there is a long road ahead to reach acceptable agility in terms of anticipating new technologies that meet the demand from the business. One of the reasons, according to participants from the IT side is the focus IT had to address IT needs at department levels than solutions that could innovatively address needs at the whole organisation level. However, the results reveal that most of the respondents agree it is the bank's innovative IT system that differentiates it from other banks. To achieve BITA and get the most value of IT from its investment, company A is in need of identifying shared activities that could encourage what Luftman et al. (2017) referred to as scoping—working toward anticipation, evaluating and applying flexible IT solutions that meet the need of the dynamic business environment in the banking industry.

4.7 Business and IT skills development

As repeatedly brought about during the interviews, the case company is struggling to demonstrate efficient use of, and value of IT accepted by the business and IT staff. What was interesting from the responses is that the main HR issues were not pointed out as a source of concern. It comes as no surprise that company A scored very low (1.33) for skills development. The literature is clear about appropriate human resource management and its positive influence on BITA (Yayla and Hu, 2009). However, the participants indicate several HR-related issues. For instance, the bank does not have consistent skill development programmes covering the entire organisation. The opportunity of an employee for personal skill development depends on which department one ends up. As job transfers rarely occur, most of the employees only know about their assigned role. According to one of the directors at the IT department, the lack of business understanding among the IT personnel, for instance, can be explained by the lack of opportunity to learn from other units and adds "*hiring at the IT department is based on IT expertise*" (D-7). Other respondents, on the other hand, say that employees simply do not have time for personal development or try new and innovative approaches (D-1, D-4, D-9) which is badly needed as the bank attempts to make improvements. Like most organisations, company A needs to implement individual training and attempt to create a trusting and innovation-oriented environment to achieve BITA (Luftman et al., 2017).

5 Conclusion

This study has assessed the level of BITA maturity at one of the banks in Ethiopia. The main objective was to find a list of barriers to BITA for an organisation in a developing country. The results of the study reveal various barriers—*lack of business/IT understanding; unclear business/IT strategies; inefficient use of available IT personnel for the right task; inadequate training of business personnel to*

use the existing IT systems; failure to capture opportunities to learn from outside providers; lack of formal metrics and oversight to measure IT value; lack of time for personal skill development; and low perception of value of IT—that contributed to the low level of BITA maturity at the case company. Consistent with other studies in the developing countries, the findings indicate that the identified barriers to BITA are found to be related to such environmental factors as the availability of skilled IT personnel and reliable IT infrastructure in the country. For instance, *the inefficient use of available IT systems, lack of business/IT understanding, and the lack of formal metrics and oversight to measure the value of IT* point to the overall low level of IT/business skills among employees in the company. However, it is worth exploring further to find out whether these barriers reflect the level of IT/business skills in the country or the current management practices at the case company. On the other hand, the lack of organisational-wide skills development arrangement is one of the barriers that needs to be addressed. The remaining barriers to BITA, such as the low perception of the value of IT need to be looked carefully. One might ask whether the bank has failed to foster better communication to improve the understanding, collaboration and partnership relationship between the business and IT units, which in turn affected the perceptions. An alternative explanation could be factors such as the availability of reliable IT infrastructure in the country. The provision of IT services when needed by the business units might have contributed to the low perception of the value of IT, and lower BITA maturity in the case company.

The findings of this study have important implications for research and practice. While the list of barriers might be a starting point for further study to identify how country contexts can influence BITA, practitioners will find the insights invaluable to optimise the use of their scarce resources in such a way that the BITA barriers are addressed appropriately. However, a word of caution is in order when interpreting the results of the study. The limitations of the study are related to the research strategy as well as the data collection and analysis methods. Even though the case study provided with the benefit of in-depth observations, the generalisability of the findings is limited. However, the authors argue that each case study is a unique opportunity to capture an insight that might not be found in other settings. Future studies might attempt to explore the different intra-organisational factors that influence BITA in similar organisations in Ethiopia to validate the findings. Quantitative research approach might also be applied to test the generalisability of the findings in Ethiopia and other developing countries. It is important to note that the results of the study identified a list of intra-organisational barriers to BITA at one point. Since BITA is a process rather than an outcome, a longitudinal study might reveal other relevant factors in organisations' journey to achieve and maintain BITA.

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