



IT Strategic Alignment Maturity and Business Performance for the Banking Industry in Kenya

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Abstract: This study explored the connection between IT Strategic Alignment Maturity and the financial performance of Kenyan commercial banks. Using the SAMM framework, six alignment maturity criteria (governance, communications, value, partnership, technology scope, and skills) were evaluated. Quantitative correlation analysis was conducted with data from CIOs representing 70% of the Kenyan banking market (all Tier One banks). Findings revealed a significant positive link between IT-business alignment and profitability. The study suggests that banks seeking increased return on assets (ROA) should prioritize the development of robust strategic alignment maturity.

Business-IT alignment (BITA) is a dynamic, ongoing process essential for organizational success (Luftman, 1996). Successful alignment requires strong management support, clear prioritization, and effective communication across all levels of the organization (Luftman, 1997). To navigate the complexities of a rapidly changing business environment, companies must consistently evaluate their IT investments and strategies (Luftman, Papp and Brier, 1999). A well-aligned IT function acts as a catalyst, driving innovation, competitiveness, and improved decision-making across the enterprise (Luftman, Papp, and Brier, 1995). However, alignment is challenging and requires collaboration between IT and other business units (Luftman, Lewis, and Oldach, 1993). When IT strategy and governance effectively support overarching business goals, organizations can transform their operations and unlock new levels of success (Haes and Grembergen, 2016).

Keywords: IT Strategic alignment maturity, Business performance, Maturity models introduction

1. Introduction

Despite ongoing efforts, misalignment between IT and business functions persists as a common challenge for organizations (Adaba, Rusu, and El-Mekawy, 2010). Though IT investments increase, many businesses find it difficult to realize the full potential of these investments (El-Mekawy, Rusu, and Perjons, 2015). This disconnect undermines digital transformation initiatives, with 66% of organizations failing to successfully integrate IT within these efforts. This misalignment often leads to suboptimal business performance and a concerning rate of IT project failures. Prior studies indicate that only 16% of projects fully meet stakeholder expectations (El-

Mekawy, Rusu, Perjons, Sedvall and Ekici, 2015; Alaceva and Rusu, 2015). Managers within Kenya's banking sector currently lack a comprehensive framework to understand and leverage the relationship between IT-business alignment maturity and return on assets (ROA).

Specific Objectives The specific objectives guiding this study were: To determine the relationship between Communications, Value, Partnership, Governance, Architecture, and Skills criteria maturity and Return on Assets of the banks in Kenya.

Research Hypothesis

1. The effectiveness of an organization's IT-related communication strategies has no impact on its business performance within the Kenyan banking sector.
2. The development of IT-related skills and expertise within an organization has no effect on its business performance within the Kenyan banking sector.
3. The strength of an organization's IT collaborations and partnerships has no impact on its business performance within the Kenyan banking sector.
4. The effectiveness of an organization's IT governance frameworks has no influence on its business performance within the Kenyan banking sector.
5. An organization's maturity in managing its IT systems and infrastructure has no bearing on its business performance within the Kenyan banking sector.
6. The level of IT-related skills within an organization has no impact on its business performance within the Kenyan banking industry.

Limitations **Sample Size:** The limited sample size (9 Tier one banks) may affect the generalizability of the findings to the entire Kenyan banking industry.

Causality: While the study establishes a correlation between alignment maturity and ROA, it's important to remember that correlation does not imply causation. There may be other factors influencing ROA. To establish true causality, a more experimental design could be considered in future research.

2. Literature Review

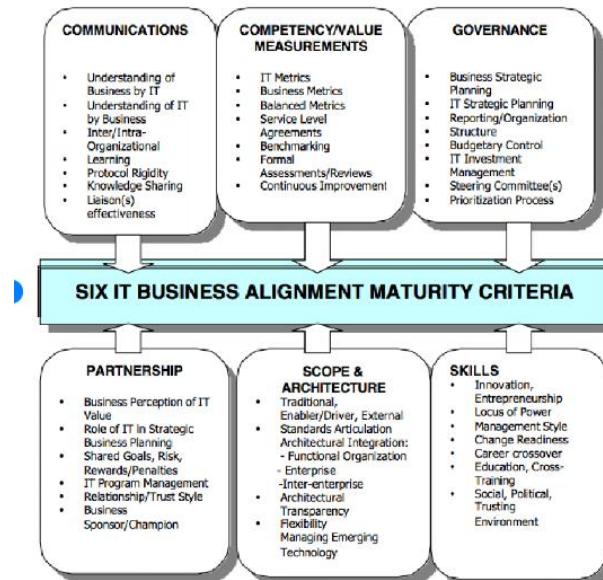
2.1 The Strategic Alignment Model

The Strategic Alignment Model (SAM) is a foundational framework within IT strategic alignment, positing four maturity levels: reactive, proactive, aligned, and collaborative (Venkatraman et al., 1993). A key strength of SAM is its ability to clarify how IT and business strategies interconnect to support organizational objectives. It also provides a structured method for assessing IT-business alignment, aiding in pinpointing areas for improvement and guiding strategic IT investment decisions (Coleman and Papp, 2006). However, operationalizing SAM can be complex, making it difficult to precisely measure alignment in practice. Critics also note that SAM may oversimplify the intricate and ever-evolving relationship between IT and business strategies (Avison et al., 2004). SAM offers a valuable lens for understanding IT-business alignment and its stages of maturity. For optimal outcomes, organizations should acknowledge the model's limitations and combine it with complementary strategic approaches (Papp, 2001).

2.2 The Strategic Alignment Maturity Model

The Strategic Alignment Maturity Model (SAMM) outlines five progressive levels of IT-business alignment maturity (Luftman, 2000). This model assists organizations in evaluating and strengthening alignment practices (Khaiata and Zualkernan, 2009). Benefits include a structured roadmap for improvement and the ability to pinpoint gaps in current alignment strategies (Luftman, 2004). Additionally, SAMM offers an objective assessment framework to track alignment progress over time (Belfo and Sousa, 2012). However, it's important to note that SAMM may not fully address the unique complexities of each organization or rapidly shifting

market dynamics (Abcouwer and Smit, 2015). Progressing through maturity levels can be hindered by resource limitations, lack of leadership support, or internal resistance (Abcouwer and Smit, 2015). SAMM provides a valuable tool for assessing and improving alignment. However, organizations should customize its use, recognizing limitations, and combine it with other strategic approaches (Mavengere et al., 2020).



Alignment Maturity Criteria. Reprinted from Luftman (2000)'s "Assessing business-IT alignment maturity" Copyright Luftman (2000).

Figure 1: Alignment Maturity Criteria

2.3 Capability Maturity Model Integration

Capability Maturity Model Integration (CMMI) offers a framework for evaluating and enhancing organizational processes with the aim of driving product and service quality improvements (Doss et al., 2021). Its adaptability across industries and focus on integrating various business functions are key strengths (Garousi and van Veenendaal, 2021). CMMI also incorporates risk management guidance (Garousi and van Veenendaal, 2021). However, its complexity can pose implementation challenges, particularly for smaller organizations with resource constraints (Ferdinansyah and Purwandari, 2021). Successful CMMI adoption requires substantial investment and a sustained commitment to quality improvement beyond simply process optimization (Ferdinansyah and Purwandari, 2021). CMMI provides a thorough model for process assessment and improvement. While it can yield significant benefits, organizations must carefully consider the resources and ongoing dedication needed for successful implementation (Asah-Kissiedu et al., 2021).

2.4 Information Technology Infrastructure Library

ITIL is a widely adopted IT service management framework offering a five-tiered maturity model (Lopes, 2021). Its strengths include promoting efficiency, streamlining service delivery, and enhancing cross-departmental communication (Al-Ashmoery et al., 2021). ITIL assists businesses in aligning IT operations with evolving strategic objectives and provides well-established industry best practices (Al-Ashmoery et al., 2021). ITIL implementation can be costly due to investments in training and specialized tools. Additionally, its complexity can make it difficult to implement effectively, particularly for smaller organizations (Wang et al., 2022). Some critics also argue that ITIL's emphasis on structure can stifle the flexibility needed to adapt to unique organizational requirements (Wang et al., 2022). ITIL offers benefits like improved efficiency, communication, and alignment, but its implementation can be costly and complex. Some find its framework overly rigid (Moudoubah et al., 2021).

2.5 Control Objectives for Information and Related Technology

COBIT (Control Objectives for Information and Related Technology) is an IT governance and management framework designed to facilitate alignment between IT initiatives and overarching business objectives (Samsinar and Sinaga, 2022). Its strengths include a foundation built on five core principles that emphasize stakeholder needs, comprehensive coverage and integration, holistic management, and a clear distinction between governance and operational functions (Samsinar and Sinaga, 2022). COBIT also streamlines communication among IT stakeholders and systematically incorporates stakeholder requirements (Nurcahya Setiawan and Permana, 2022). However, COBIT's complexity can make implementation challenging, especially for smaller organizations or those with limited resources (Shoae et al., 2022). Some critics find COBIT's focus on compliance overly rigid in a dynamic technological landscape, while proponents maintain that the framework offers flexibility and customization (Ikhsan et al., 2021). COBIT provides a structured approach to IT governance, aiding organizations in aligning IT strategy with business goals. Although implementation can be resource-intensive, the benefits include enhanced efficiency and stakeholder integration (Al-Fatlawi et al., 2021).

2.6 Conceptual Framework

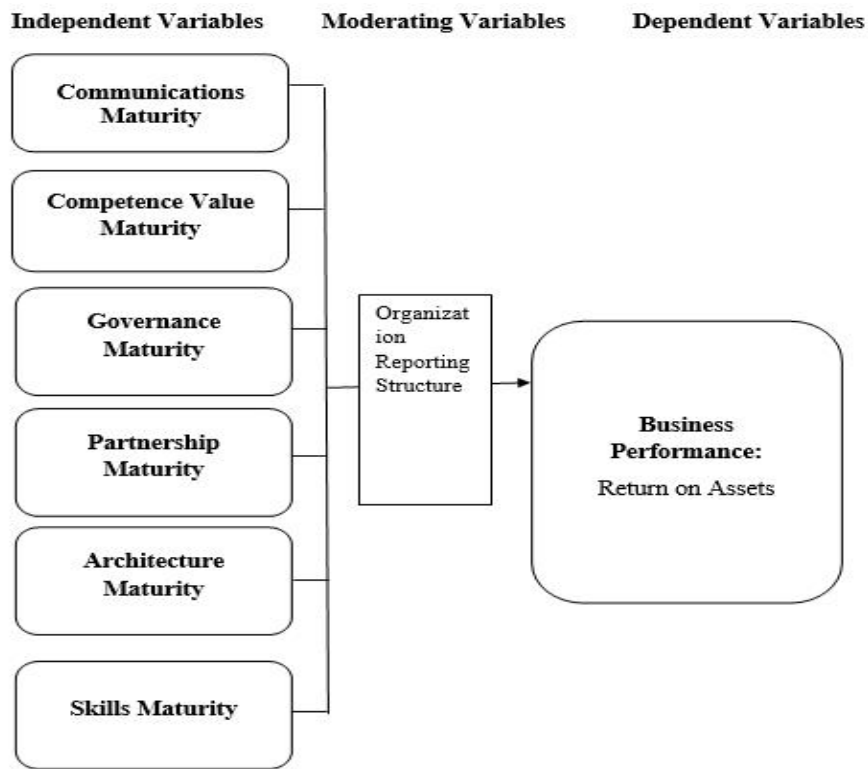


Figure 2: Conceptual Framework

In this study, the independent variables are the six alignment maturity criteria outlined in the SAMM framework. Return on Assets (ROA) is the dependent variable we seek to understand. Additionally, the organizational reporting structure acts as a moderating variable, potentially influencing the strength of the relationship between alignment maturity and ROA. The specific SAMM criteria examined are Communication, Value/Competency, Governance, Partnership, Architecture, and Skills.

A research study's conceptual framework visually illustrates the hypothesized connections between independent, dependent, and potentially moderating variables. This visualization aids researchers in grasping how the variables might interact, leading to the formulation of testable hypotheses (Tuzovic and Kabadayi, 2021).

3. Research Methodology

The study employed the quantitative correlational design. The quantitative correlational design is a research method that investigates the relationship between two or more variables using numerical data. One of the strengths of the design is that correlational research is ideal for quickly gathering data from natural settings. Correlational research can uncover relationships that may have not been previously known. Quantitative research uses standardized data collection protocols and tangible definitions of abstract concepts, making replication and direct comparisons of results possible (Blaise, Halloran and Muchnick, 2018).

One of the limitations is that correlational research cannot establish causality because it only identifies relationships between variables. Correlational research cannot control for all confounding variables that may influence the relationship between variables. The findings from correlational research may not be generalizable to other populations or contexts. The quantitative correlational design can quickly uncover relationships between variables using standardized data collection protocols. The design cannot establish causality, control for all confounding variables, or guarantee generalizability (Alzoubi, Alshurideh, Kurdi, Alhyasat and Ghazal, 2022).

3.1 Data Analysis and Findings

Kenya has 39 commercial banks, as well as deposit taking microfinance institutions and Savings and Credit Cooperatives, but the research will focus only on fully fledged commercial banks. The top tier banks in Kenya, which have a market share index of 74.68%, include ABSA, Standard Chartered, KCB, Equity Bank, Cooperative Bank, CFC Stanbic Bank, DTB, IandM, and NCBA. The Bank Supervision and Banking Sector Reports are useful lead and lag indicators for the banks, and show stiff competition for profits, deposits, and loan accounts among the banks. The CEOs of these banks are looking to digital transformation and innovation to gain a competitive advantage, which requires strategic alignment to improve bank performance (CBK, 2021).

There are unique challenges and opportunities faced by commercial banks in Kenya. These are: Rapidly evolving mobile banking technology. Regulations governing data privacy and cybersecurity. Competition from non-traditional financial service providers and fintech companies. The need to reach underserved rural populations.

Table 1: Bank Market Share

Peer Group	Combined Weighted Market Share (%)		No. of Institutions		Total Net Assets, (Ksh. B)		Total Deposits, (Ksh. B)		Capital and Reserves (Ksh. B)		Profit Before Tax (Ksh.B)	
	Dec-19	Dec-20	Dec-19	Dec-20	Dec-19	Dec-20	Dec-19	Dec-20	Dec-19	Dec-20	Dec-19	Dec-20
Large	74.68	74.55	9	9	3,607	4,033	2,710	3,061	538	599	143	97
Medium	17.10	17.21	9	9	805	910	623	732	130	141	18	17
Small	8.22	8.24	21	21	398	463	299	330	61	68	-2	-3
Total*	100	100	39	39	4,809	5,406	3,632	4,123	729	807	159	112

* Charterhouse Bank Limited and Chase Bank (K) Limited, which were in Liquidation and Imperial Bank Ltd, which were in Receivership have been excluded.

Source: CBK

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	Communication criteria	Value of IT/Competency criteria	Governance criteria	Partnership criteria	Scope/architecture criteria	Skills criteria	Total Assets	ROA
N Valid	9	9	9	9	9	9	9	9
Mean	3.1000	3.0911	3.2000	3.1922	3.1922	3.0311	11.6989	2.7000
Mode	3.00	3.00	3.00	3.00	3.00	3.00	11.48 ^a	2.10 ^a
Std. Deviation	.00000	.33333	.44096	.44096	.44096	.33333	.17822	.74162
Std. Error of Skewness	.717	.717	.717	.717	.717	.717	.717	.717
Std. Error of Kurtosis	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400
Minimum	3.00	3.00	3.00	3.00	3.00	3.00	11.48	1.70
Maximum	3.00	4.00	4.00	4.00	4.00	4.00	11.95	3.70
Sum	27.00	28.00	29.00	29.00	29.00	28.00	105.29	24.30
Skewness		3.000	1.620	1.620	1.620	3.000	.328	-.151
Kurtosis		9.000	735	735	735	9.000	-1.124	-1.933

Figure 3: Analysis Results

3.2 Descriptive Analysis

Table 2: Research Data

	Co-op bank Roa	Equity roa	Stanbic roa	DTB roa	Stanchart roa	Absa roa	landM roa	NCBA roa
Skills maturity	(3.0,2.9)	(3.3,3.3)	(3.0,2.2)	(2.7,1.9)	(3.1,3.0)	(3.0,2.4)	(3.3,3.5)	(3.0,1.9)
communication maturity	(3.1,2.9)	(3.4,3.3)	(3.1,2.2)	(2.8,1.9)	(3.2,3.0)	(3.1,2.4)	(3.4,3.5)	(3.1,1.9)
architecture maturity	(3.0,2.9)	(3.3,3.3)	(3.0,2.2)	(2.7,1.9)	(3.1,3.0)	(3.0,2.4)	(3.3,3.5)	(3.0,1.9)
Value maturity	(2.9,2.9)	(3.2,3.3)	(2.9,2.2)	(2.6,1.9)	(3.0,3.0)	(2.9,2.4)	(3.2,3.5)	(2.9,1.9)
Governance maturity	(3.0,2.9)	(3.3,3.3)	(3.0,2.2)	(2.7,1.9)	(3.1,3.0)	(3.0,2.4)	(3.3,3.5)	(3.0,1.9)
Partnership maturity	(3.1,2.9)	(3.4,3.3)	(3.1,2.2)	(2.8,1.9)	(3.2,3.0)	(3.1,2.4)	(3.4,3.5)	(3.1,1.9)
overall maturity	(3.0,2.9)	(3.3,3.3)	(2.9,2.2)	(2.7,1.9)	(3.1,3.0)	(3.0,2.4)	(3.3,3.5)	(2.9,1.9)

4. Hypothesis Testing

This research employs correlational analysis to investigate connections between independent and dependent variables. The findings are discussed in the context of their support or lack of support for the research hypotheses.

4.1 Communications Criteria and Return on Assets

The first hypothesis was that there is no relationship between communications maturity criteria and business performance. Using the provided data, The resulting correlation coefficient was approximately 0.693, indicating a positive correlation between communications maturity and ROA.

Alaceva and Rusu's (2015) suggested that ineffective internal communication can damage employee commitment and hinder an organization's ability to achieve strategic alignment. Conversely, Hall and Liedtka (2007) proposed that IT plays a crucial role in enhancing communication flows within a business. They argued this improves decision-making and enables the company to better respond to market needs.

4.2 Value or Competency Criteria and Return on Assets

This study examined the potential connection between an organization's IT value-competency maturity and its financial performance (ROA) within the banking sector. A Pearson correlation analysis was conducted on data from 9 banks. The results revealed a moderate positive correlation ($r = 0.589$). This finding suggests that as IT value-competency maturity increases, ROA is also likely to improve. Therefore, the original hypothesis of no relationship was rejected.

4.3 Governance Criteria and Return on Assets

This research examined the relationship between IT governance maturity and a company's Return on Assets (ROA) within the banking sector. A Pearson correlation analysis of data from nine banks indicated a strong positive correlation ($r = 0.925$) between these variables. This finding suggests that organizations with robust IT governance practices tend to demonstrate higher financial performance. This result supports prior research, by Robinson (2005) and Willson and Pollard (2009) which links effective IT governance to improved business outcomes.

4.4 Partnership Criteria and Return on Assets.

This study investigated the connection between the maturity of a bank's partnerships (both internal and external) and its Return on Assets (ROA). Analysis of data from nine banks revealed a positive correlation ($r = 0.469$), suggesting that stronger partnership practices are associated with improved financial performance. This finding aligns with prior research by Bodilly (2005) and Bruno-Britz (2008) emphasizing the importance of collaboration and strategic partnerships within the banking industry.

4.5 Scope and Architecture Criteria and Return on Assets

This study explored the relationship between a bank's IT scope/architecture maturity and its Return on Assets (ROA). Data analysis from nine banks indicated a weak positive correlation ($r = 0.278$). This finding suggests that, while not a strong predictor, improvements in IT architecture appear to have some association with enhanced financial performance. This aligns with existing research by Bruno-Britz (2008) that highlighted the importance of strategic IT architecture investments for competitive advantage within the banking sector.

4.6 Skills Criteria and Return on Assets

This research investigated the connection between the IT skills maturity within a banking organization and its Return on Assets (ROA). Analysis of data from nine banks revealed a strong positive correlation ($r = 0.803$). This suggests a significant association between employee IT skills development and improved financial performance. It's important to note that correlation does not prove causation, and other factors might contribute

to this relationship. The finding aligns with prior research by Gbangou and Rusu (2016) emphasizing the importance of skilled IT workforces for business success in the banking sector.

5. Conclusion

This research, in line with Adaba et al. (2010), identified a positive relationship between strategic alignment maturity and business performance within the Kenyan banking sector. The study suggests that a well-developed alignment across six key criteria (communication, competency, governance, partnership, scope, and skills) contributes to improved performance. Strategic alignment maturity measures how effectively an organization mobilizes its resources and personnel to achieve the desired outcomes outlined in its strategy. The findings confirm that organizations with a higher level of strategic alignment maturity tend to achieve better results. This is likely because their teams are working cohesively towards shared strategic goals. The study aligns with Reich and Benbasat (2000) in demonstrating that high alignment often translates to superior performance, with up to 80% of performance variations potentially explained by alignment levels. The research suggests a positive correlation between strategic alignment maturity and return on assets. These findings echo those of Reich and Benbasat (2000). It's important to acknowledge, as noted by Chan et al. (2006), that the relationship between strategic alignment and profitability can be complex. Factors like industry, organizational size, and environmental uncertainty can influence this connection. Future research recommendations include Longitudinal studies: Tracking the alignment maturity of banks over time and its impact on ROA would offer valuable insights into the long-term benefits of strategic alignment. Industry comparisons: Comparing these findings with similar studies across different industries or countries could reveal interesting patterns and potential variations.

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