



The Impact of Business-IT Coordination Culture on the Performance of Accounting Information Systems Considering the Dynamics of the Environment

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ABSTRACT

An accounting information system (AIS) is a critical technology-driven asset for all organizations, whose produced and disseminated information is of paramount importance in making effective strategic decisions and reaching current organizational benefits. The quality of accounting information in these decisions depends on the performance capabilities of these systems. Previous studies have detected a number of direct organizational benefits gained through effective information technology (IT) governance. Such benefits encompass improvements in the performance of enterprise information systems, including accounting information systems. The present study aimed to examine the capacity of aligned IT-business culture as a communication mechanism in IT governance to improve the performance of the AISs in organizations. The data were collected using a questionnaire distributed among accounting experts selected from the companies listed in Tehran Stock Exchange. Partial least squares method was used to analyze the collected data. The results indicate that IT management capabilities manage to improve the AIS performance under effective guidance and control of the IT governance in spite of the environmental dynamism.

Keywords:

Accounting information system , Environmental dynamism , Information technology governance.

1. Introduction

Information asymmetry between managers and investors in an agency relationship leads to a demand for information disclosure. According to information economy theory, a decline of information asymmetry in the stock market increases liquidity and reduces capital costs (Mahdavi & Rezaei, 2018). In other words, Financial statements and information disclosures a potentially important tool for managing the communication between company performance and monitoring by the shareholders (Parsamehr, Kasravia, & Fazli, 2017). Furthermore, the integration of information technology (IT) and business processes has irreversibly changed the way according to which modern organizations operate. Most medium to large-sized organizations invest a large amount of their time, money, and effort on the information systems, which are a combination of hardware, software, and network capacities, in order to increase the efficiency and productivity of business processes (Dehning, Richardson, & Stratopoulos, 2005). The performance of the AISs influences the quality of accounting information reports; hence, the operation of the AIS is of great importance for organizations due to the pressure imposed by investors and other stakeholders to disclose further information.

Since such information is extensively used within the organization for planning and decision making, its relevance, accuracy, and timeliness even is of greater importance.

Studying and using the experiences of successful systems is one of the techniques to improve, upgrade, and develop organizational systems. Some beneficial techniques of the field can also be modelled. Examination and recognition are the next step in the modeling process of organizational systems. Previous studies have detected a large number of direct organizational benefits that can be gained through effective IT governance and consist of improvements in the performance of enterprise information systems, including accounting information systems. IT governance is an integral part of organization management and involves governing and organizing structures and processes to ensure that IT supports and develops the organization's goals and strategy. The executive and board of directors in an organization are mainly in charge of the IT governance.

In recent years, a majority of empirical and theoretical studies on the IT governance have been

affected by Peterson's theory (Peterson, 2004), according to which, in addition to the structural mechanism, IT governance is also created by two procedural and communication mechanisms (Ko & Fink, 2010, Jewer & McKay, 2012, & De Haes & Van Grembergen, 2009). Although the structural, procedural, and communication mechanisms are related to some extent, there are unique features attributed to each mechanism.

Structural mechanisms generally encompass organizational structure, decision-making patterns, and assignment of monitoring and control tasks to individuals and committees. The procedural mechanisms of the IT Governance generally address the best framework of practices, formal IT management methods and techniques, and techniques adopted in the organization.

On the other hand, the communication mechanisms of the IT governance specifically concentrate on formal and informal human interactions and mostly refer to governance, communication, culture, and knowledge sharing processes in organizations.

Considering the company's resource-based approach as a basis for evaluating IT governance mechanisms and the features mentioned in this perspective for the potentials to create competitive advantage and improve the performance of the organizational systems, the communication mechanisms of the IT governance seem to possess these features more than the other two mechanisms (Chapman & Wieder, 2015).

Given that only the communication mechanisms have the features required for a resource or capacity according to the resource-based theory, a review of the recent research in the field of IT structure reveals that communication mechanisms have been overlooked in most studies as they have mainly focused on structural and procedural mechanisms to evaluate the IT structure. This is due to the higher capability of the two aforementioned mechanisms in comparison to the communication mechanisms.

Organizations with powerful IT leaders may benefit less from an aligned IT-business culture as one of the communication mechanisms of IT governance.

Furthermore, competitive and technological pressures, known as the dynamism of the business environment, also affect strategic opportunities and threats in organizations. In a similar vein, different

external conditions may also have effects on the type of information system in organizations. Accordingly, selecting an information system for an organization, in turn, can bring new competitive advantages or affect the current competitive advantage.

Regulating IT management capabilities in the face of varying external pressures, IT governance can act as a regulator.

To confirm the significance of this issue, the present study delved into the capacity of the communication mechanism of the IT structure in improving the efficiency and performance of the capabilities of IT governance and AIS in organizations.

2. Theoretical Foundations and Review of Literature

2.1. IT Governance Foundations

IT governance is an integral part of organizational management and involves managing and organizing structures and processes to ensure that IT supports and develops the organization's goals and strategies. IT governance is used to guarantee that the following goals are achieved:

- Alignment between IT and the organization and the realization of the pre-defined benefits;
- IT implementation to empower organizations in seizing opportunities and maximizing benefits;
- Effective exploitation of IT resources; and
- Proper management of IT-related risks.

IT governance is of paramount importance since the expectations and the reality do not always match; hence, management should focus on the following points:

- Utilizing IT facilities with acceptable quality in a timely manner and on a budget;
- Controlling and using IT to return business values; and
- Employing IT to increase productivity and efficiency while controlling the IT risks.

Previous studies have documented that effective IT governance is correlated with promoted organizational performance. A majority of these empirical studies address the direct relationship between IT governance and organizational performance and examine how the

interaction between IT governance and the other organizational capabilities and resources brings such an advantage (Prasad, Heales, & Green, 2010).

Accordingly, there is an opportunity to detect the relationship between IT governance and other organizational capabilities in order to provide a more thorough understanding with regard to the direct effects of IT governance and its role in improving organizational performance.

Contributing to corporate governance, the IT governance makes an organization achieve its strategy, goals, and missions. The IT governance mechanisms aim to foster positive collaboration between business and IT management performance (Ping-Ju Wu, Straub, & Liang, 2015).

2.2. Company's Resource-Based Approach

Academic researchers have investigated a variety of theoretical frameworks to address the questions on the IT governance. Previous research on the IT governance used contingency theory, communication theory, and institutional theory. The necessity of the contingency-based management is rooted in the fact that the manager's performance should always be assessed according to his status and a set of conditions underlying his activities. In other words, the contingency approach seeks to coordinate managerial responses with unique issues and opportunities in different situations

Furthermore, the company's resource-based approach is an appropriate theoretical foundation for examining the relationship between IT resources and the organization's information system (Wade & Hulland, 2004, Melville, Kraemer, & Gurbaxani, 2004). This approach has been employed by a number of researchers (e.g., Ali and Green, Ping Ju, Prasad, etc.) in the field of IT governance (Chapman & Wieder, 2015).

The resource (capacity)-based approach, emerged in the 1980s and 1990s, is to gain sustainable competitive advantage. In this approach, internal resources and capacities play a critical role in organization's performance. Organizations should seek competitive advantage in themselves, not in a competitive environment. To take advantage of new opportunities, it is much more profitable for the

companies to exploit internal resources and capacities rather than employing the new ones.

In fact, a resource-based perspective considers resources (capacities) as the most important factor in organizational superiority. Resources can provide or sustain competitive advantage for the companies if they are valuable, rare, unique, and irreplaceable.

This approach is regarded as a robust paradigm considering IT/ information system management resources, their capabilities, and contribution to organizational performance (Wade & Hulland, 2004, Melville, Kraemer, & Gurbaxani, 2004).

2.3. IT Project and Service Management

Organizations generally carry out IT/ information system projects to bring significant changes and improve business processes and organizational capabilities (Chapman & Wieder, 2015). Broad IT/ information system projects often need to spend a significant portion of organization resources (Seddon, Calvert, & Yang, 2010). In this regard, the capabilities of an organization to successfully complete IT / information system projects is undoubtedly of paramount importance in achieving the benefits of these investments (Kearns & Sabherwal, 2006, Jugdev, Mathur, & Fung, 2007).

IT service management encompasses providing internal and external stakeholders with technical and business supports in order to exploit the existing IT / information system infrastructure (Kang & Bradley, 2002, Jia & Reich, 2013).

When an organization implements a new information system or significantly promotes the capacity of an existing information system, these operations are generally considered to be an IT / information system project. All IT / information system projects can be examined in terms of standard project features, including the need to complete a project run on a specific budget, on a planned date, with the expected specific results and acceptable quality.

The impact of IT service management on the performance of information systems and the optimal methods to evaluate the quality of IT services have been a hotbed for research and scientific debates (Chapman & Wieder, 2015).

In Iran, there is little experience regarding the full implementation of each IT service management framework. Furthermore, the private or public sectors

also seem to have little awareness about the techniques by which organizations can improve the quality of IT services.

While senior executives, board of directors, and even experts in an organization do have no proper understanding of the IT requirements and prerequisites, not only is the allocation and attraction of credits in the IT sector considered as an investment but also it is regarded as a cost with no capital return.

Moreover, the financial status of the companies and organizations - both in the private and public sectors- have not been favorable, and liquidity has always been and is a bottleneck for their business. This problem has posed a chronic challenge, especially among the private companies; hence, the corporate management has always focused on gaining liquidity to pursue the main activity of the concerned business. Consequently, the support sectors, which are also part of the IT field, are not considered as the priorities (Sharifi, 2012).

This function and capability in the communication mechanism raises the following question: Can IT governance as a more robust system adapt and rearrange other organizational capabilities and resources in response to changing strategic needs? To examine how these mechanisms work in different environments under competitive and technological pressures would provide more insight into the potentials of the IT governance in these environments (Teece, 2014, Eisenhardt & Martin, 2000).

The presence of effective IT services and support in an organization ensures that support IT activities of the IT systems are flexible, accessible, and secure.

There have been also studies examining whether IT/ information system capabilities can operate dynamically through changing the business processes (Eisenhardt & Martin, 2000, Teece, Pisano, & Shuen, 1997) and enable organizations to act in incrementally changing environments in order to overcome their competitors.

2.4. Accounting Information System

In the wake of the global financial crisis and corporate scandals, firms are under to improve the level of information to stakeholders. However, the level of information that is not legally required and that is disclosed can vary among companies and countries (Salimi, 2017). An AIS is a critical technology-driven asset to all organizations, whose

produced and disseminated information is of paramount importance in making effective strategic decisions and reaching current organizational benefits.

Accounting information systems manage the collection, storage, processing, and analysis of business events and accounting data as well as the production and distribution of accounting information reports. There are various types of information systems to be employed by organizations, and almost all organizations require a certain number of accounting information systems to support, control, and record business events and process accounting information (Nelson, Todd, & Wixom, 2005, Neely & Cook, 2011).

System quality and information quality, individually and collectively, have impacts on user satisfaction. A high-quality information system can better meet its users' needs and optimize the performance of users and thus the organization as such the organizations should adopt such a technology and information system to the greatest extent possible (Muda & Erlina, 2019).

Some researchers (e.g., Rame and Rhode, 2007; Veikin and Chen Hall, 2010) have shown that a high quality AIS can bring about significant benefits to an organization.

Accordingly, the present study considers the AIS as a two-dimensional source of IT/ information systems, which may have different levels of management performance reporting and forward-looking reporting performance. These two functions make the AIS potentially reach value, rarity, irreplaceability, and non-replicability as complementary resources, while interacting with other organizational capabilities and resources in order to achieve competitive advantage (Chapman & Wieder, 2015).

2.5. Aligned IT-business culture

There is a rich literature on strategic coordination regarding the benefits of organizational performance and value achieve by strategic IT-business alignment. A key prerequisite in achieving the strategic alignment is an organizational culture fostering knowledge and partnerships between IT staff and other employees (Kearns & Sabherwal, 2006, Kearns & Lederer, 2003). Such a culture probably encourages business managers as well as IT executives to actively use strategies technology applications in order to face with the

organization's greater opportunities and risks. Despite the significant benefits obtained from a strategic alignment condition, there is still a gap in terms of an aligned culture (Peterson, 2004, Ward & Peppard, 1996).

Cultivating specific cultural values is a complicated social task, as it heavily relies on the staff to ensure the effectiveness of cultural efforts (Chapman & Wieder, 2015). Given the widespread influence of IT and information system in an organizational environment, it is difficult to predict the results of a realistic replacement for an aligned IT-business culture. Even when an external counseling company is working on an alignment strategy between business and IT components, organizational staff still need to believe in and adopt these strategies in order for them to succeed. These observations indicate that an organizational culture involving bilateral partnerships can be valuable, rare, unique, and largely irreplaceable; therefore, such a culture as a potential organizational capability, in accordance with the company's resource-based theory, can be converted into a competitive advantage (Bhatt & Grover, 2005).

2.6. Environmental dynamism

Investors' policy and managers' decisions are only objective in terms of the complexity and dynamism of the business environment. Management decisions are neither absolute nor independent; however, they justify the degree of certainty for the nature of decision makers' policy.

The company's top executives seem to experience the greatest number of responses in an uncertain environment. This occurs when selecting appropriate policies or responding to an immediate threat in the environment. Investment on the Research and Development (RandD) sections is a sample response to such an insecurity. A dynamic environment is where decision-making factors are in an unstable state. In a dynamic environment, the accounting information are also used differently. For example, accounting faces many challenges in companies engaged in research and development activities or experiencing volatility in sales or profits (Aqaei, Ahmadian, & Sefidgaran, 2017).

One of the major tasks of IT governance is to exploit the capabilities of the organization according to the company's resource-based theory and to gain and maintain long-term benefits such as improving the

performance of the information system in such a complicated environment. The present study was to verify this claim through using one of the specific mechanisms of such governance (i.e., aligned IT-business culture).

3. Research Hypotheses

IT governance mechanisms direct and control the use of other organizational resources and capabilities with regard to changing strategic needs, opportunities and threats. Any competitive advantage gained by effective IT governance is thus realized through regulating and improving IT management capabilities, IT resources, and information systems. Organizations having accounting information of higher quality, in comparison to their competitors, also achieve more success than their competitors since they have better evidence for their strategic and operational decisions.

An evaluation of the IT governance mechanisms in the previous section revealed that communication mechanisms probably have a significant impact on an organization's capabilities in reaching competitive advantage through effective IT governance. In accordance with a review of the relevant literature, a communication mechanism specified as valuable, rare, unique, and irreplaceable was selected so that it could be classified as a factor promoting the organization and in particular improving the performance of the AIS (based on the company's resource-based theory). This mechanism is the aligned IT-business culture.

Leadership and performance of the IT senior executive is a key bridge between the top-level organizational strategies (i.e., governance) and the implementation of these strategies at the management level, which contain both the supply-side technical governance and demand-side strategic governance (Preston, Chen, & Leidner, 2008). Performance in terms of goods or services to be provided in a given time period stated (Anvary Rostami & et al, 2017). It is well-documented that the IT senior executive's governance has impacts on IT management capabilities; however, organizations with powerful IT leaders may benefit less from an aligned IT-business culture. Exploiting the capacity of expert IT/information system contractors through outsourcing contracts for IT management activities is also expected to undermine or eliminate the benefits of such an aligned culture. Much evidence, however, supports the claim that the aligned IT-business culture is a critical

potential to influence and improve IT management capabilities and subsequently improve the performance of an organization's information systems, including accounting information system. Accordingly, two hypotheses were raised as follows:

- 1) An organizational culture based on the business staff-IT staff alignment has a positive impact on the IT project capability.
- 2) An organizational culture based on the business staff-IT staff alignment has a positive impact on the IT service capability.

As previously noted, organizational accounting information systems are usually complicated systems, which contain multiple software packages and hardware environments modified and updated over time. Accordingly, Hypotheses 3 and 4 were proposed:

- 3) The better IT project capability has a positive impact on the AIS performance.
- 4) IT service capability has a positive impact on the AIS performance.

The communication mechanisms examined in this study may make the organization be adapted and even progress under varying conditions (Chapman & Wieder, 2015). Moreover, these capabilities are also expected to mitigate the impact of environmental chaos on organizational performance. Accordingly, the fifth hypothesis and its sub-hypotheses were proposed:

- 5) Environmental dynamism has an impact on the AIS performance through influencing IT capabilities.
 - 5-1. IT project capability has a greater impact on the AIS performance in less dynamic environments.
 - 5-2. IT service capability has a greater impact on the AIS performance in a more dynamic environment.

4. Research methodology

This applied study was correlational in terms of method since it aimed to determine the relationship between two or more variables. The statistical population of this study was determined from the large-sized companies randomly selected from 398 companies listed in Tehran Stock Exchange.

Ideal respondents for this study needed to be aware of the organizational culture and IT management capabilities; hence, the questionnaires were distributed among financial managers and accountants. Given that the tests and analyses were conducted at an

organization level, only one questionnaire was submitted to each organization.

The questionnaire consisted of two sections containing general and specialized questions. The specialized questions addressed the following six dimensions: planning, budgeting, and forecasting systems; management reporting systems; IT support services; IT projects; market environment and technology; organizational strategy; and IT. The questions were scored based on a 5-point Likert scale. The Likert scale is often used to extract theoretical data from questionnaires because the responses are obtained easier and faster, require not much space and no writing, and offer more options for statistical tests. Four, five, six or seven-point Likert scales are common in questionnaires.

In order to measure the corporate size, the stock market value logarithm for the concerned companies on 2018/03/20 was considered. With setting the size limitation for the companies, those companies whose stock market value logarithm was greater than the average among other companies in the same industry were selected as the statistical population (N=142). Based on Cochran's formula, the sample size was estimated to be 104.

5. Definition of Variables and Research Model

Given the research procedure and the need to quantify the variables, the research variables were first defined as follows:

Aligned IT-business culture: IT needs to present its capability in practice and respond to business needs quickly and cost-effectively so that the organizations can rely on them and properly move forward.

IT project capability: Allocating, tracking, and utilizing resources to achieve specific goals within a specific period is called project management.

IT service capability: This term refers to all activities (incorporated in policies, processes, and procedures) performed by the organization to control the operations and to deliver and plan IT services.

Accounting information system: These systems manage the collection, storage, processing, and analysis of the business events and accounting data, as well as the production and distribution of accounting information reports.

Environmental dynamism: The environmental dynamism depends on the rate of changes in environmental factors. Dynamic environments impose more uncertainty, in comparison to static environments. Environmental uncertainty is considered as a threat to organizational effectiveness.

Figure 1 shows a simple model demonstrating the relationships among the variables included in this study. The number of arrows corresponds to the number of hypotheses.

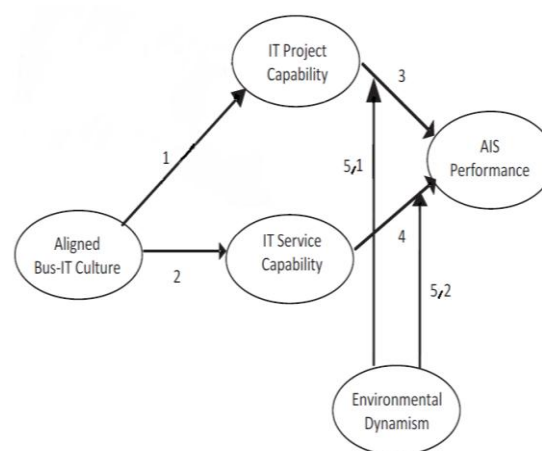


Figure 1. Conceptual model of the study

6. Research Findings

6.1. Inferential analysis

In this study, confirmatory factor analysis (CFA), structural equation modeling (SEM), and partial least squares (PLS) techniques were used to test the research hypothesis and confirm the validity of the proposed model. The PLS technique determines the coefficients so that the model can predict the final dependent variable with the highest accuracy. The partial least squares method, also known as PLS in regression modeling, is one of the multivariate statistical methods, which can simultaneously model one or more response variables for several explanatory variables despite the following limitations: uncertain distribution of response variable, low number of observations, or significant auto-correlation between explanatory variables.

6.2. Confirmatory factor analysis results (model validation)

Before testing the research questions and conceptual model, we need to verify the validity of the models measuring the exogenous and endogenous variables using the two-step CFA. The CFA is one of the oldest statistical methods used to examine the relationship between latent (obtained factors) and observed (questionnaire items) variables and represents a measurement model. This technique determines the correlation between factors and variables as well as the correlation between the study factors.

Factor loading was used to analyze the questionnaire structure and to detect the constituent factors of each construct. Factor loading determines the variance of the parameters explained by their latent variable. According to Fornell and Larcker, the estimated standardized factor loads should be >0.4 and ideally ≥0.7. In this study, all indices had factor loads >0.4; therefore, the validity of the questionnaire items in measuring the concepts was confirmed at this stage.

In order to measure convergent validity, average variance extracted (AVA) and factor loading are considered. The former is using a convergence scale for a set of observed items in a structure, and it is actually a percentage of the described variance among

the items. The AVA must be >0.5 to confirm the convergent validity (Houman, 2011).

Convergent validity indicates that the parameters of each construct manage to explain at least half of the variance in the items. In the present study, all the studied structures had AVA value >0.5.

Composite Reliability (CR) and Cronbach's alpha were used to assess the reliability of the questionnaire. According to Fornell and Larcker, the composite reliability should be ≥0.7 to indicate an acceptable internal convergence. All the coefficients in this study were >0.7, confirming the reliability of the measuring instrument.

6.3. Goodness of Fit (GOF)

The goodness of fit index is a measure of fit between the quality of the structural model and the measured model. The GOF index is calculated as:

$$GOF = \sqrt{AVE} \times \sqrt{R^2} = 0.760 \times 0.646 = 0.491$$

The GOF values >0.4 represent the model fit. In this study, the GOF was estimated to be 0.491, showing the acceptable fit of the model. To put it simply, the data in this study fit the theoretical structure and factorial structure of the study, suggesting that the questions are consistent with theoretical constructs.

Table 1. Correlation Matrix and Divergent Validity

Latent variables	1	2	3	4	5	6	Mean	SD	\sqrt{AVE}
Aligned IT-business culture	1						2.075	0.66	0.791
environmental dynamism	-0.284	1					2.62	0.638	0.748
AIS (forward-looking approach)	0.351	-0.288	1				2.263	0.673	0.782
IT project capability	0.796	-0.29	0.216	1			2.744	0.466	0.718
IT service Capability	0.457	-0.169	0.22	0.379	1		2.263	0.673	0.722
AIS (reporting performance)	0.428	-0.239	0.387	0.364	0.111	1	2.276	0.535	0.759

Table 1 shows the Pearson correlation coefficients for the relationship between latent variables in pairs. Divergent validity values are also present in Table 1. Divergent validity indicates that each indicator only measures its own structure and their composition is such that all structures are well separated.

Accordingly, the variance of each latent variable for its own indices must be greater than that for the other indexes. The results of Fornell and Larcker's index are shown in the Table above. In this Table, the last column shows the square root of the average variance extracted (AVE). In order to confirm the divergent

validity, the square root of the AVE needs to be greater than all the coefficients of correlation between the concerned variable and the other variables. As shown in this Table, this condition is met and the divergent validity is thus confirmed.

Figure 2 represents the two-step CFA and the structural equations in the estimation mode of standard and significance coefficients. In this model, the

aligned IT-business culture is the independent variable, the environmental dynamism is the intervening variable, and the other two variables 'IT project capability' and 'IT service capability' are mediator variable. According to this model, the path coefficient is significant at 95% when the t-statistic is >1.96.

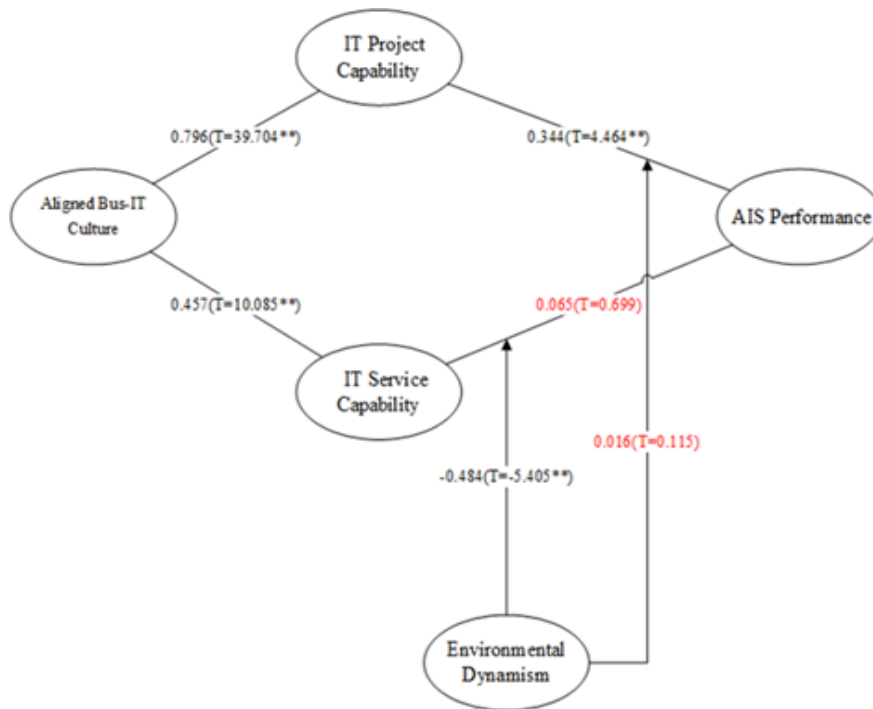


Figure 2. Model in standard coefficient estimation mode

6.4. Structural Equation Results

The Structural Model Validation Criteria are as follows.

The results of the structural equations in testing the research hypotheses are presented in Table 3.

Table 2. Structural Model Validation Criterion

Criterion type	Index	Index Interpretation
Model Validation	R ²	R ² is a coefficient of determination which is measures of how much variability in outcome is accounted by the observed variables. Value 0.67, 0.33, 0.19 are substantial, moderate, and weak respectively.
	Path coefficients (beta)	The Path coefficients (beta) indicates the existence of a linear relationship , the intensity and direction of this relationship between two latent variables.
	t	t-value or t measures the effect of an independent latent variable on a dependent latent variable.

Table 3. Path coefficients (beta), t-statistic, coefficient of determination, and test results of research hypotheses

Hypotheses	Beta	t	R ²	Direction of correlation	Result
1	0.796	39.704	0.208	+	Confirmed
2	0.457	10.085	0.633	+	Confirmed
3	0.344	4.464	0.139	+	Confirmed
4	0.065	0.699		Rejected	
5-1	-0.0484	-5.405	0.234	-	Confirmed
5-2	0.016	0.115		Rejected	

Test result of Hypothesis 1: According to Table 3, Hypothesis 1 with ($t= 39.704 > 1.96$) was significant at 95%; thus, the researcher's claim is proved with the probability of 95%. The positive beta (0.796) indicates the positive impact of the culture based on the business staff-IT staff alignment on IT project capability.

Test result of Hypothesis 2: According to Table 3, Hypothesis 2 with ($t= 10.085 > 1.96$) was significant at 95%; thus, the researcher's claim is proved with the probability of 95%. The positive beta (0.457) indicates the positive impact of the culture based on the business staff-IT staff alignment on IT service capability.

Test result of Hypothesis 3: According to Table 3, Hypothesis 3 with ($t= 4.464 > 1.96$) was significant at 95%; thus, the researcher's claim is proved with the probability of 95%. The positive beta (0.344) indicates the positive impact of the IT project capability on the AIS performance.

Test result of Hypothesis 4: According to Table 3, Hypothesis 4 with ($t= 0.699 > \pm 1.96$) was not significant at 95%; thus, the researcher's claim is rejected with the probability of 95%.

Test result of Hypothesis 5-1: According to the results of structural equations, since $t=-5.405$ is out of the critical range ± 1.96 , the researcher's claim indicating that "environmental dynamism plays a moderating role in the relationship between IT project capability and AIS performance" is confirmed. Given the negative beta coefficient (-0.484), the moderating role of environmental dynamism in the relationship between the two variables is negative. In other words, when environmental dynamism is higher, the impact of the IT project capability on the AIS performance is greater than when the low environmental dynamism.

Test result of Hypothesis 5-2: According to the results of structural equations, since $t=-115$ is within the critical range ± 1.96 , the researcher's claim indicating that "environmental dynamism plays a moderating role in the relationship between IT service

capability and AIS performance" is rejected. Accordingly, when environmental dynamism is lower, the impact of the IT service capability on the AIS performance does not significantly differ from its impact in environments with low dynamism at 95%.

The coefficient of determination for the AIS performance was 0.139 before including the variable 'environmental dynamism', and then it was enhanced up to 0.373, meaning that the environmental dynamism could improve the relationship between IT capabilities and AIS performance by 23.4%. The effect size indicates that the effect of environmental dynamism on the relationship between IT capabilities and AIS performance was as much as 37.3%, suggesting that the relationship between the two variables was strongly and significantly influenced and moderated.

7. Discussion and Conclusion

The findings of the present study strongly support existing recommendations on the significance of effective design, construction, and use of IT governance in maximizing the benefits derived from the organization's information system.

As a theoretical framework, the company's resource-based approach underpinned the present research. A review of the literature on the company's resource-based view mentioned in the previous sections as well as the findings of this study confirms that specific aspects of IT governance and IT management can be considered as organizational capabilities, which improve the AIS performance.

In particular, the communication mechanisms of IT governance play a greater role in such an improvement than structural or procedural mechanisms. This study focused on a specific IT governance mechanism, namely the aligned business-IT culture.

With regard to the findings, the IT project capability has a significant relationship with the AIS performance, as the literature on information systems has also emphasized on the significance and impact of the capabilities to better implement IT projects on these systems. According to previous research (noted in the section 'Foundations of Research') and the test results of the hypotheses 1 and 3, the higher the aligned IT staff -business staff culture (more generally the aligned IT-business culture) is in an organization; the more positive its impact on the performance of the organization's information system is through improving the execution and implementation of IT projects.

However, in dynamic environments, there is a far greater need for timely information and AIS modification in response to changing customer preferences, competitor's operations, and technology penetration. Given the urgent need for organizations to respond to such crisis, the alignment process in the AIS enters into the IT field; making these variables have impacts on each other.

On the other hand, the environmental dynamism has a significant impact on the capacity of the organizations to gain competitive advantage through improving the AIS performance.

In environments with higher dynamism, given the higher rate of technological variations, the competitive advantage is maintained for a shorter term. As a result, the organization grasps each opportunity to improve the information used in its strategic decisions (generally derived from the AIS). Furthermore, forward-looking accounting information systems with high efficiency may not be considered much in environments with low dynamism because it does not seem necessary to spend resources on such systems.

As a result, organizations with high capacity using forward-looking accounting information systems can retain their competitive advantage over a longer period of time. This argument could justify the non-significant impact of the IT service capability on accounting information systems in less dynamic environments.

Finally, it is worth noting that the interactions among IT governance, IT management capabilities, and IT/information system resources requires adaptation and alignment with competitive changes and technological pressures. In response to immediate needs, those in charge of the performance of IT

governance in an organization must appropriately regulate the organizational strategy and path addressing the management of the IT performance with regard to the changes in environmental pressures.

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