Accounting information system excellence and goal achievement: evidence from information and communication technology businesses in Thailand

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Keywords
Accounting Information System Excellence, AIS Excellence, Goal Achievement

Abstract

The purpose of this study is to examine the effect of accounting information system excellence on goal achievement via the mediating influences which include financial reporting efficiency, best accounting practice, and accounting information quality. Data was collected from 152 firms in information and communication technology businesses in Thailand by questionnaire mail survey and key informant is accounting executives. The statistic used to analyze is the ordinary least square regression. The results of OLS regression reveal that three of the four dimensions of AIS excellence have significant positive influence on accounting outcomes, and accounting outcomes have significant positive influence on goal achievement. Also, the results found that executive vision and employee knowledge as the antecedents of AIS excellence were effective. Finally, competitive pressure has significant positive moderation effect on information technology resources and AIS excellence.

1. Introduction

The advancement of technology has an important role in changing the behavior of consumers and entrepreneurs. It affects changes in the management of the organization and business competition. Therefore, organizations need to be vigilant, because the world has entered into a knowledge base economy that focused on dependency information, knowledge and wisdom which is the creative economy that is continuing to drive innovation and create economic growth and sustainable development. So, the information is very important to get a quick and accurate. Results in information systems have a role and who involved will be understood and used effectively for the survival of the organization (Laudon and Laudon, 1998). At present, the business is highly competitive and rapidly changing environment to quickly affect the business operation. Thus, that information is necessary to perform business. Therefore, information is one of the organization's resources to be developed to use it effectively.

In the development of information systems must have an understanding of the structure and relationships of the various subsystems, which will help with the planning and designed information system. The organizations want to use information to solve problems and help manager for effective decisions. Therefore, collection of appropriate data, complete and update information makes it be accurate, complete and it can be used to solve the problems of the organization better and managers can use that information to make decisions more effectively to achieve organization goal (Nicolaou, 2000; Choe, 2004). So, it is seen that the accounting information system is a role causing the organization greatly. It can be said that if any components are effective for accounting information these components can create a competitive strategy over competitors in the same industry (Kearns and Lederer, 2004). At the same time, most of the problems from case studies, articles and events found that some organizations have an accounting information system, but could not bring their business to a goal. Thus, the author is interested in studying the factors that affect the quality of accounting information systems to promote and support the effectiveness of the accounting information system. It can help organizations to increase competitiveness and efficiency in the operation of the organization in the long term.

The remains of this study are structured as follows. The first, the researcher provides the relevant literatures and hypotheses development of all constructs. The second, the researcher explain the methodology including; data collection procedure and measurement, measure validation, and statistical technique. The third, the researcher discusses the results of this study. The fourth, the

researcher explains the contributions and directions for future research. Finally, the researcher concludes of this research.

2. Literature review and hypothesis development

To examine the relationships between AIS excellence and goal achievement, AIS excellence is an independent variable of this study that includes 4 dimensions: complete information collaboration, compatible information system linkage, accurate business information interpretation, and comprehensive accounting information presentation (Konthong and Ussahawanitchkit, 2010). Furthermore, goal achievement is a dependent variable of this study. Therefore, the conceptual model presents the relations between accounting information system excellence and goal achievement as shown in Figure 1.

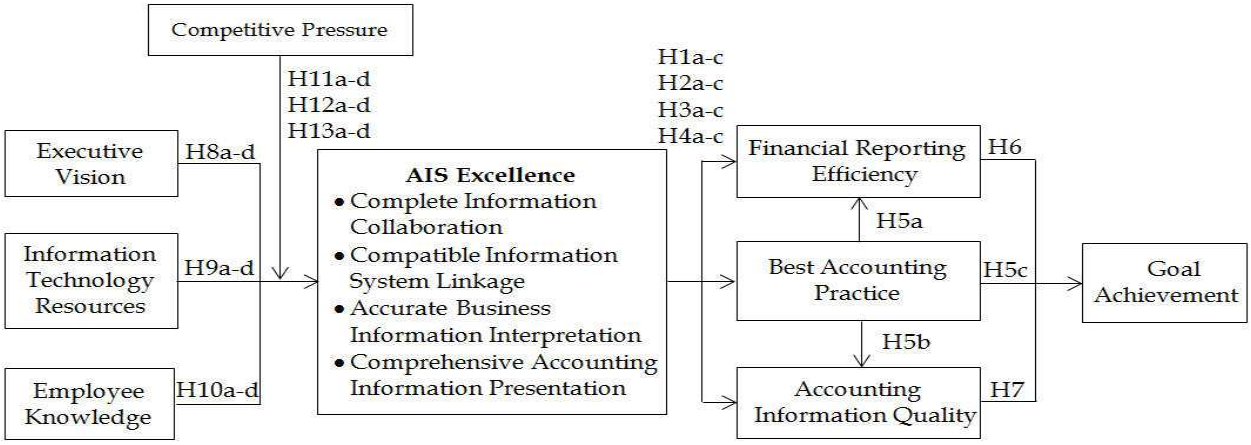

Figure 1: Conceptual Model of AIS Excellence and Goal Achievement

2.1 Accounting Information System Excellence: AIS Excellence

AIS excellence is the core construct of this study. This study defines AIS excellence as the system ability to create a collaboration of information in each unit and link flexible and complete system to explain the business information and present comprehensive information.

Prior research showed that AIS excellence directly affects goal achievement, both financial and non-financial performance measures. In addition, numerous studies examined the influences on financial reporting efficiency, management accounting effectiveness, and accounting practice development (Hunton et al., 2003) and influence relationship to accounting outcome, including management information effectiveness, accounting information quality, and accounting practice improvement and firm performance (Ismail and King, 2005; Chapman and Kihn, 2009; Konthong and Ussahawanitchkit, 2010).

For the construct of AIS excellence, four dimensions are detailed: complete information collaboration, compatible information system linkage, accurate business information interpretation, and comprehensive accounting information presentation.

2.1.1 Complete Information Collaboration

Complete information collaboration refers to coordination, communication and transfer of information between entities all work together for a common goal. Rom and Rohde (2007), and Chapman and Kihn (2008) indicate that AIS is an integrated information system using technology of client-server that combines all business operations across several areas within the firm, whole business transaction data collected and stored into a main database. Therefore, complete information collaboration helps all functions inside the corporate to be connected, shared business information, and attended with the others completely.

Rom and Rohde (2007) found that best accounting practice derive from relevant data collecting, summarizing, and reporting through complete information collaboration. Konthong and Ussahawanitchkit (2010) indicate that complete information collaboration of AIS offers the integrated information that is accurate, timely, and reliable for business management. This dimension enhances the ability of management information providing for related users. Moreover, Sajady et al. (2008) stated that the quality of accounting information is affected by the implementation of AIS. Therefore, the associations are hypothesized as follows:

Hypothesis 1: The higher the complete information collaboration is, the more likely that firm will gain greater a) financial reporting efficiency, b) best accounting practice, and c) accounting information quality.

2.1.2 Compatible Information System Linkage

The emphasis on the system designs by overall flexibility of the system is the key to significantly improve the efficiency of accounting information system. Beyond linking to the other information systems, the link ability of AIS also includes the ability of the system to work compatibly with the firms' hardware and software applications. Therefore, in this study defines compatible information system linkage as AIS can compatible integrated with tools and other information systems that are available within the organization with flexible and appropriate.

Grabski and Leech (2007) stated that accounting information system implementation has to parallel with both internal and external factors for instance, existed information system comprises a firm's software and hardware (Bradford and Florin, 2003). Moreover, Wongsim et al. (2011) stated that quality of accounting information have a positive relationship with accounting information system adoption processes. For this reason, this study forecasts that compatible information system linkage reinforces financial reporting efficiency, best accounting practice, and quality of accounting information. Respectively, the related hypotheses are postulated as the following:

Hypothesis 2: The higher the compatible information system linkage is, the more likely that firm will gain greater a) financial reporting efficiency, b) best accounting practice, and c) accounting information quality.

2.1.3 Accurate Business Information Interpretation

The third dimensions of AIS excellence is accurate business information interpretation. The important role of AIS is to convert collected business transaction data into accounting information, both financial and non-financial information, providing for relevant users to apply it to support their decision making. Thus, an accountant collects data from several functions within organizations via database management system which data are entered only once. The redundant data is entering and unnecessary processes are reduced. Furthermore, Rom and Rohde (2007) stated that AIS transforms were designed to the best practices of business data processing causing in the accuracy of transactional translation. Therefore, in this study defines accurate business information interpretation as the interpretation and processing the data into quality accounting information that comprises reality and neutrality characteristics which help the relevant users for decision-making.

Past research showed that AIS can provide the quality information that influences on decision making success (Konthong and Ussahawanitchakit, 2010). Onaolapo (2012) explained that benefits of AIS can be evaluated by its impacts on improving the decision making process, accounting information quality, internal controls, performance measurement, and facilitating company's transactions. In addition, accuracy information interpretation offers beneficial information for operational control (Yeunyong and Ussahawanitchakit, 2009). Therefore, the associations are hypothesized as follows:

Hypothesis 3: The higher the accurate business information interpretation is, the more likely that firm will gain greater a) financial reporting efficiency, b) best accounting practice, and c) accounting information quality.

2.1.4 Comprehensive Accounting Information Presentation

The last dimensions of AIS excellence is comprehensive accounting information presentation. In addition to the competencies mentioned above, AIS can provide accounting information responding to decision makers' requirements because the competition in the business has different patterns of decision making emerge. Hence, AIS should be presented information that is comprehensive, flexible, and available to support the differently decision forms. Furthermore, information presentation should provide information about economic transactions that decision makers use for planning, controlling, and monitoring their organizations (O' Donnell and Davis, 2000).Therefore, in this study defines comprehensive accounting information presentation as representation information covering all business operations of the company to meet all the requirements of the accounting data and the enhancement of understanding of the relevant users.

Previous research showed the difference in presentation formats of AIS can effect on decision making and judgment. Nicolaou (2000) stated that accounting information system effectiveness is

measured by the satisfaction of the decision makers on the information quality produced by the AIS. In addition, Konthong and Ussahawanitchakit (2010) found the relationship between comprehensive accounting information presentation and accounting practice improvement. Wimoonard and Ussahawanitchakit (2014) found positive relationship between accounting information presentation and financial reporting quality, information reliability, and information usefulness**.** Respectively, the related hypotheses are postulated as the following:

Hypothesis 4: The higher the comprehensive accounting information presentation is, the more likely that firm will gain greater a) financial reporting efficiency, b) best accounting practice, and c) accounting information quality.

2.2 Mediating of the relationship between AIS Excellence and Goal Achievement

The consequence of AIS excellence in this study is accounting outcomes which consist of best accounting practice, financial reporting efficiency, and accounting information quality.

2.2.1 Best Accounting Practice

Accounting practice is the accounting procedure of gathering information for the report, comprising the financial information to the relevant users (Hakansson and Lind, 2004). In this study, best accounting practice is defined as the enhancement of accounting processes, which include accounting procedures, data collection, classification, summary, reports, including accounting information communications and the ability to share information. The accounting practices must be according to the generally accepted accounting principles and accounting standards. Accounting practices have a significant role in the arrangement of financial reporting and financial information that the relevant users use to evaluate the firm's financial position and performance (Hongsombud and Ussahawanitchakit, 2012).

Prior research indicated that the accounting practice improvement has positive relationship with financial reporting quality (Konthong and Ussahawanitchakit, 2010). Moreover, Iskander and Lowe (2013) found that the performance accounting practice has positive relationship with quality of works. Therefore, the associations are hypothesized as follows:

Hypothesis 5: The higher the best accounting practice is, the more likely that firm will gain greater a) financial reporting efficiency, b) accounting information quality, and c) goal achievement.

2.2.2 Financial Reporting Efficiency

AIS excellence outcomes cover using data, performance of the business in financial and non-financial (Neely and Cook, 2011). Biddle, Hilary, and Verdi (2009) defined financial reporting efficiency as the accuracy of financial reporting that shows the firm performance, particularly in expected cash flows.

Previous research showed that financial reporting efficiency has positive relationship with investment efficiency (Lambert, Liuz, and Verrecchia, 2007). In addition, many studies found the association between financial reports from AIS and firm performance (Nicolaou, 2000; Premuroso and Bhattachaya, 2008; Cormier, Ledoux, and Magnan, 2009). Moreover, Delone and Mclean (2003) and Chitmun and Ussahawanitchakit (2012) found that the information quality influences on the operation of the corporate. Therefore, the hypotheses are proposed as follows:

Hypothesis 6: The higher the financial reporting efficiency is, the more likely that firm will gain greater goal achievement.

2.2.3 Accounting Information Quality

The term "quality" in link with accounting information can be understood as the achievement of general objectives of accounting. Hall (2011) proposes that the dimensions of the quality of information consist of: accuracy, timeliness, relevance, completeness, and summarizing. Furthermore, Gelinas and Dull (2012) state that dimensions of information quality are: accurate, relevant, timely, and complete. In this study, accounting information quality refers to the accuracy, timeliness, completeness, consistency, and relevance of the use accounting information applied to solve the problem and forecast the economic event accurately and clearly.

From prior studies found that the accounting information quality encourages the efficiency of management planning and decision making, and increases the organizational performance (Chong and Eggleton, 2007; Bourguignon, 2005; Konthong and Ussahawanitchakit, 2010). Therefore, the associations are hypothesized as follows:

Hypothesis 7: The higher the accounting information quality is, the more likely that firm will gain greater goal achievement.

2.3 Antecedent of AIS Excellence

From the literature review found that many variables affect AIS excellence such as executive visions, information technology resources, and employee knowledge.

2.3.1 Executive Vision

Executive vision defines as motivating, optimizing, and confidence of a leader to state direction to future of the business linked to increase firm performance (Yeunyong and Ussahawanitchakit, 2009).

Prior research found that executive vision influences on purchase of computer software, hardware, and people training to support the accounting system operated (Teo and Ranganathan, 2003; Tharenou et al., 2007). Furthermore, Bernroider (2008) found the positive association between the role of information technology governance and successful implement of enterprise resource planning (ERP), and commitment of top management drives to success. Therefore, the associations are hypothesized as follows:

Hypothesis 8: The higher the executive vision is, the more likely that firm will gain greater a) complete information collaboration, b) compatible information system linkage, c) accurate business information interpretation, and d) comprehensive accounting information presentation.

2.3.2 Information Technology Resources

An information technology resource is to apply a power of information technology to promote AIS to create effective information according to the need of users (Lui, 2008).

Previous research of Nada and Robert (2005) found that information technology resources supports AIS to offer information integration, speed, relevance, accuracy, easy understanding, system competency-IT supported, and information satisfaction of user to improve strategic cost management and decision making, and increases firm performance. Moreover, Bradford and florin (2003) indicated that AIS quality may occur when organization's IT resources, including hardware, software, people, network system and data will be integrated with applied AIS. Therefore, the hypotheses are proposed as follows:

Hypothesis 9: The higher the information technology resource is, the more likely that firm will gain greater a) complete information collaboration, b) compatible information system linkage, c) accurate business information interpretation, and d) comprehensive accounting information presentation.

2.3.3 Employee Knowledge

Employee knowledge defined as an accountant capability to operate the AIS that offer value of information to manage business to complete goal (Fowler, 1999).This focuses on the accounting knowledge, skills, and experiences of accountants in AIS computerized that it can be used to be efficiency and effectiveness (Sorensen et al., 2008).

Prior research found the effects of employee knowledge on AIS quality have to be recognized for developing AIS so that it can be quality system (Yeunyong and Ussahawanitchakit, 2009). Greenstein and McKee (2004) indicated that the employees who operate AIS are trained and involved continuously involving IT knowledge and practices to support computer-based AIS. In addition, Sorensen et al. (2008) found that AIS quality depends on knowledge accountants who can operate the system to be efficiency and effectiveness. Therefore, the associations are hypothesized as follows:

Hypothesis 10: The higher the employee knowledge is, the more likely that firm will gain greater a) complete information collaboration, b) compatible information system linkage, c) accurate business information interpretation, and d) comprehensive accounting information presentation.

2.4 Moderating effect of the relationship

This study assigns competitive pressure as the moderator of the relationship between the antecedents and AIS excellence.

2.4.1 Competitive Pressure

According to Michael Porter (1980), competitive force includes threat of substitute products or services, intensity of competitive rivalry, threat of new entrants, bargaining power of customers (buyers), and bargaining power of suppliers. In this study, competitive pressure refers to competition situations between competitors in the market have violent and lack opportunities for future growth (Auh and Menguc, 2005). As a result, businesses must find a new way or a new approach to be competitive to create a competitive advantage.

From prior research found that the increasing competitive pressure affects the firm face forces them to find ways of decreasing the time it takes to develop the product, bring products to the market and offer efficient and effective service to clients, while at the same time, maximizing firm's earnings (Masumi, 2013). Therefore, competitive pressure forces organizations to focus on developing the accounting information system excellence to create a competitive advantage. Thus, the associations are hypothesized as follows:

Hypothesis 11: Competitive pressure will positively moderate the relationship between executive vision and a) complete information collaboration, b) compatible information system linkage, c) accurate business information interpretation, and d) comprehensive accounting information presentation.

Hypothesis 12: Competitive pressure will positively moderate the relationship between information technology resource and a) complete information collaboration, b) compatible information system linkage, c) accurate business information interpretation, and d) comprehensive accounting information presentation.

Hypothesis 13: Competitive pressure will positively moderate the relationship between employee knowledge and a) complete information collaboration, b) compatible information system linkage, c) accurate business information interpretation, and d) comprehensive accounting information presentation.

3. Methodology

3.1 Sample and Data Collection Procedure

The sample in this study is the firms in information and communication technology business in Thailand because this business is a complex information procedure, with the uncertainty of technology, and competitive pressure. Hence, the firms in this industry need to have an effective information system to manage and help to be a competitive advantage. The samples in this study are 152 firms that have used AIS are computer-based systems. The questionnaire was assessed by an academic professional in terms of face validity and content validity. A mail survey process via questionnaire was used for data collection. The key informant is accounting executives of each firm.

3.2 Test of Non-Response Bias

To test non-response bias and to detect and consider possible problems with non-response errors was investigated by t-test that followed to Armstrong and Overton (1977). The researcher was compared early and late responses about total assets, number of employees and the period of time in operating business. The results were not significant between early and late responses. Therefore, it was implied that these received questionnaires show insignificant non-response bias for the analysis in this study.

3.3 Variable Measurement

To measure each construct in the conceptual model, all variables are anchored by five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) excluding control variables. In addition, all constructs are developed for measuring from definition of each constructs and examine the relationship from theoretical framework and prior literature reviews. Hence, the variable measurements of this study are described as follows:

3.3.1 Dependent Variable

Goal achievement (GA) is the ending dependent variable in this research affected by financial reporting efficiency, best accounting practice, and accounting information quality. It comprises five items developed as a new scale adapted with some modification from previous research. It measured by firm's perception on both financial and non-financial performance such as continuous firm growth, market share, customer acceptance, customer retention and innovation improvement.

3.3.2 Independent Variables

AIS Excellence refers to the system ability to create a collaboration of information in each unit and linked flexible and complete system to explain the business information and present comprehensive information. This variable includes four dimensions: complete information collaboration, compatible information system linkage, accurate business information interpretation, and comprehensive accounting information presentation.

Complete information collaboration refers to coordination, communication and transfer of information between entities all work together for a common goal. Four items were developed as a new scale adapted from Konthong and Ussahawanitchakit (2010).

Compatible information system linkage defined as AIS can be compatible integrated with tools and other information systems that are available within the organization with flexibility and appropriation. Five items were developed as a new scale adapted from Konthong and Ussahawanitchakit (2010).

Accurate business information interpretation refers to the interpretation and processing the data into quality accounting information that comprises reality and neutrality characteristics which help the relevant users for decision-making. Four items were developed as a new scale adapted from Konthong and Ussahawanitchakit (2010).

Comprehensive accounting information presentation defined as representation information covering all business operations of the company to meet all the requirements of the accounting data and the enhancement of understanding of the relevant users. This dimension comprises four items that were developed as a new scale adapted from Konthong and Ussahawanitchakit (2010).

3.3.3 Mediating Variables

Financial reporting efficiency refers to the accuracy of financial reporting that shows the firm performance, particularly in expected cash flows. Four items were developed as a new scale adapted from Konthong and Ussahawanitchakit (2010).

Best accounting practice is defined as enhancement of accounting processes, which include accounting procedures, data collection, classification, summary, reports, including accounting information communications and the ability to share information. Six items were developed as a new scale adapted from Konthong and Ussahawanitchakit (2010).

Accounting information quality is defined as the greater ability of accounting information that shows the quality of decisions to assess, analyze, and forecast the economic event accurately and clearly. This variable contains four items that ask for the perceptions of related users' acceptance in the quality of public information presentation, understanding of actual economic event, complete information according to general accepted accounting principle (GAAP), and neutral and unbiased of accounting information.

3.3.4 Antecedent Variables

Executive vision defines as motivating, optimizing, and confidence of a leader to state direction to future of the business linked to increase firm performance. This variable is measured by four items that adapt from Nicolaou (2000).

Information technology resources refer to applying a power of information technology to promote AIS to create effective information according to the need of users. Four items were developed to measure this variable. The items questioned for perceptions of the flexibility of retained AIS for congruence with new implemented system, adequacy of IT professionals, and the supporting of organization's network system and database management system.

Employee knowledge defined as an accountant capability to operate the AIS that offers value of information to manage business to complete goal. This variable is measured by four items that adapt from Nicolaou (2000).

3.3.5 Moderating Variable

Competitive pressure refers to competition situations between competitors in the market have violence. Four items were developed to measure this variable. These items ask for perceptions of competitive pressure in threat of new entrances and rivalry among existing competitors.

3.3.6 Control Variables

Control variables in this study comprise system years and firm size. System years are measured by number of years that installed system. Firm size is measured by number of employees.

3.4 Reliability and Validity

Variable	Factor Loadings	Cronbach's Alpha
Complete Information Collaboration (CIC)	0.814-0.911	0.900
Compatible Information System Linkage (CISL)	0.808-0.902	0.915
Accurate Business Information Interpretation (ABII)	0.815-0.924	0.907
Comprehensive Accounting Information Presentation (CAIP)	0.850-0.892	0.893
Financial Reporting Efficiency (FRE)	0.812-0.907	0.875
Best Accounting Practice (BAP)	0.761-0.861	0.902
Accounting Information Quality (AIQ)	0.810-0.906	0.888
Goal Achievement (GA)	0.590-0.882	0.842
Executive Vision (EV)	0.803-0.892	0.889
Information Technology Resources (ITR)	0.846-0.915	0.900
Employee Knowledge (EK)	0.848-0.921	0.912
Competitive Pressure (CP)	0.845-0.925	0.916

Table 1: Result of Measure Validation

In this study, the Cronbach's alpha was used to test the reliability of the measurement. Coefficient alpha indicates the degree of internal consistency among items in questionnaires that should be greater than 0.70 (Nunnally and Berstein, 1994). In this study, convergent validity was tested by the factor loading, each of construct should be greater than the 0.40 cut-off and all factors are statistically significant (Nunnally and Berstein, 1994).

The results of measure validation show in table 1. Table 1 presents all variables have factor score between 0.590 - 0.925 indicating that there is the construct validity. Moreover, the reliability of all variable is accepted because Cronbach's alpha for all variables are shown between 0.842 – 0.916.

3.5 Statistical Techniques

All dependent and independent variables in this study are the metric scale. Therefore, OLS regression is appropriate technique to test all hypotheses. From the conceptual model and hypotheses, the following eight equation models are formulated:

$$\textit{Equation 1: } FRE = \beta_0 + \beta_1 CIC + \beta_2 CISL + \beta_3 ABII + \beta_4 CAIP + \beta_5 BAP + \beta_6 SYST + \beta_7 SIZE + \varepsilon_1$$

$$\textit{Equation 2: } BAP = \beta_8 + \beta_9 CIC + \beta_{10} CISL + \beta_{11} ABII + \beta_{12} CAIP + \beta_{13} SYST + \beta_{14} SIZE + \varepsilon_2$$

$$\textit{Equation 3: } AIQ = \beta_{15} + \beta_{16} CIC + \beta_{17} CISL + \beta_{18} ABII + \beta_{19} CAIP + \beta_{20} BAP + \beta_{21} SYST + \beta_{22} SIZE + \varepsilon_3$$

$$\textit{Equation 4: } GA = \beta_{23} + \beta_{24} FRE + \beta_{25} BAP + \beta_{26} AIQ + \beta_{27} SYST + \beta_{28} SIZE + \varepsilon_4$$

$$\textit{Equation 5: } CIC = \beta_{29} + \beta_{30} EV + \beta_{31} ITR + \beta_{32} EK + \beta_{33} CP + \beta_{34} (EV*CP) + \beta_{35} (ITR*CP) + \beta_{36} (EK*CP) + \beta_{37} SYST + \beta_{38} SIZE + \varepsilon_5$$

$$\textit{Equation 6: } CISL = \beta_{39} + \beta_{40} EV + \beta_{41} ITR + \beta_{42} EK + \beta_{43} CP + \beta_{44} (EV*CP) + \beta_{45} (ITR*CP) + B_{46} (EK*CP) + \beta_{47} SYST + \beta_{48} SIZE + \varepsilon_6$$

$$\textit{Equation 7: } ABII = \beta_{49} + \beta_{50} EV + \beta_{51} ITR + \beta_{52} EK + \beta_{53} CP + \beta_{54} (EV*CP) + \beta_{55} (ITR*CP) + \beta_{56} (EK*CP) + \beta_{57} SYST + \beta_{58} SIZE + \varepsilon_7$$

$$\textit{Equation 8: } CAIP = \beta_{59} + \beta_{60} EV + \beta_{61} ITR + \beta_{62} EK + \beta_{63} CP + \beta_{64} (EV*CP) + \beta_{65} (ITR*CP) + \beta_{66} (EK*CP) + \beta_{67} SYST + \beta_{68} SIZE + \varepsilon_8$$

4. Results and Discussion

Table 2 shows descriptive statistics and correlation matrix for all variables. Correlation coefficients of variables are ranging from 0.212 - 0.823. With respect to potential problems relating to multicollinearity, variance inflation factors (VIF) were used to test the intercorrelations among independent variable. In this study, the VIFs range from 1.11 to 3.85, well below the cut-off value of 10 (Hair et al., 2010), meaning that the independent variables are not correlated with each other. Therefore, there are no substantial multicollinearity problems encountered in this study.

Variables	CIC	CISL	ABII	CAIP	BAP	FRE	AIQ	GA	EV	ITR	EK	CP
Mean	3.86	3.78	3.94	3.81	3.86	3.90	3.76	3.62	3.85	3.78	3.62	3.94
S.D.	0.64	0.65	0.63	0.59	0.58	0.62	0.58	0.56	0.66	0.71	0.68	0.69
CIC	1.00											
CISL	.823**	1.00										
ABII	.716**	.696**	1.00									
CAIP	.692**	.685**	.705**	1.00								
BAP	.625**	.580**	.642**	.693**	1.00							
FRE	.548**	.547**	.581**	.709**	.779**	1.00						
AIQ	.533**	.510**	.517**	.609**	.783**	.649**	1.00					
GA	.343**	.424**	.240**	.336**	.470**	.335**	.442**	1.00				
EV	.515**	.433**	.468**	.485**	.625**	.519**	.459**	.495**	1.00			
ITR	.511**	.471**	.426**	.513**	.590**	.550**	.466**	.561**	.779**	1.00		
EK	.401**	.419**	.315**	.448**	.506**	.449**	.478**	.520**	.496**	.668**	1.00	
CP	.231**	.224**	.240**	.323**	.243**	.295**	.215**	.291**	.392**	.283**	.212**	1.00

** p<.01, * p<.05

Table 2: Descriptive Statistics and Correlation Matrix

Table 3 shows the results of OLS regression analysis for 8 equations. The results indicate the relationship between accounting information system excellence dimensions, financial reporting efficiency, best accounting practice, accounting information quality, and goal achievement.

Independent Variables	Dependent Variables			
	FRE (1)	BAP (2)	AIQ (3)	GA (4)
CIC	-.091	**.182***	-.001	
	(.092)	(.106)	(.098)	
CISL	.067	-.012	.066	
	(.089)	(.103)	(.095)	
ABII	.010	**.226****	-.063	
	(.078)	(.088)	(.083)	
CAIP	**.339*****	**.403*****	.129	
	(.079)	(.086)	(.085)	
BAP	**.533*****		**.686*****	**.390*****
	(.071)		(.076)	(.142)
FRE				-.101
				(.117)
AIQ				**.202***
				(.117)
System Year	**.093***	**.115****	.074	-.002
	(.048)	(.055)	(.051)	(.074)
Firm Size	.059	.048	-.107	.031
	(.090)	(.105)	(.096)	(.138)
Adjusted R^2	0.660	0.540	0.612	0.213
Maximum VIF	3.776	3.701	3.776	3.848

***p<.01, **p<.05, *p<0.10,[a] Beta coefficients with standard errors in parenthesis.

Table 3: Results of OLS Regression Analysis[a]

For the AIS excellence dimensions, the results show that complete information collaboration (CIC) has a significant positive influence on best accounting practice (β_9= 0.182, p<0.10), but it is not significantly related to financial reporting efficiency (β_1= -0.091, p>0.05)and accounting information quality (β_{16}= -0.001, p>0.05). Thus, hypothesis 1b is supported, but hypotheses 1a and 1c are not supported.

The second dimension of AIS excellence, compatible information system linkage (CISL) is not significantly related to best accounting practice (β_{10}= -0.012, p>0.05), financial reporting efficiency (β_2= 0.067, p>0.05) and accounting information quality (β_{17}= 0.066, p>0.05). Thus, hypotheses 2a, 2b and 2c are not supported.

Accurate business information interpretation (ABII) has a significant positive influence on best accounting practice (β_{11} = 0.226, p<0.05), but it is not significantly related to financial reporting efficiency (β_3 = 0.010, p>0.05) and accounting information quality (β_{18}= -0.063, p>0.05). Thus, hypothesis 3b is supported, but hypotheses 3a and 3c are not supported.

The last dimension of AIS excellence, comprehensive accounting information presentation (CAIP) has a positively significant effect on financial reporting efficiency (β_4 = 0.339, p<0.01), and best accounting practice (β_{12} = 0.403, p<0.01), but it is not significantly related to accounting information quality (β_{19}= 0.129, p>0.05). Thus, hypotheses 4a and 4b are supported, but hypothesis 4c is not supported.

In summary of AIS Excellence, the results indicated that three of the four dimensions of AIS excellence have significant positive influence on accounting outcomes. The results are similar to prior evidence, AIS is designed around the best practices of business operation procedures and operates on the integrative database which reduces the errors occurring along the data entering,

processing, and reporting (Sutton, 2006; Rom and Rohde, 2007). Moreover, AIS generates real-time information presentation that increases the transparency of financial disclosures. Therefore, it enhances the financial reporting efficiency (Premuroso and Bhattachaya, 2008). Finally, AIS Excellence has not direct effect on accounting information quality, but it has indirect effect through best accounting practice.

In the next part, the effects of accounting outcomes on goal achievement reveal in model four of table three. The results found that best accounting practice and accounting information quality are positive effect on goal achievement (β_{25} = 0.390, p<0.01; β_{26} = 0.202, p<0.10), but financial reporting efficiency is not significantly related to goal achievement (β_{24}= -0.101, p>0.05). Thus, hypotheses 5c and 7 are supported, but hypothesis 6 is not supported. In addition, best accounting practice has a significant positive influence on financial reporting efficiency and accounting information quality (β_5 = 0.533, p<0.01; β_{20} = 0.686, p<0.01). Therefore, hypotheses 5a and 5b are supported.

Independent Variables	Dependent Variables			
	CIC (5)	CISL (6)	ABII (7)	CAIP (8)
EV	**.324*** **	.156	**.334*** **	.163
	(.119)	(.125)	(.124)	(.116)
ITR	.127	.165	.054	.116
	(.134)	(.141)	(.140)	(.131)
EK	.132	**.225** **	.084	**.265*** **
	(.099)	(.104)	(.103)	(.096)
CP	.064	.075	.107	**.192** **
	(.076)	(.081)	(.080)	(.075)
EV*CP	-.104	.032	-.069	-.037
	(.100)	(.106)	(.105)	(.098)
ITR*CP	**.222** **	.066	**.220** *	**.282** **
	(.112)	(.118)	(.117)	(.109)
EK*CP	-.041	-.085	-.001	**-.161** *
	(.093)	(.098)	(.097)	(.091)
System Year	.068	-.009	.038	.015
	(.071)	(.075)	(.075)	(.070)
Firm Size	-.153	-.020	-.099	-.018
	(.138)	(.145)	(.144)	(.134)
Adjusted R^2	0.294	0.217	0.229	0.327
Maximum VIF	3.845	3.845	3.845	3.845

***p<.01, **p<.05, *p<0.10, [a] Beta coefficients with standard errors in parenthesis.

Table 4: Results of OLS Regression Analysis[a]

Table four shows the results of antecedent variables, executive vision (EV) has a significant positive influence on complete information collaboration and accurate business information interpretation (β_{30} = 0.324, p<0.01; β_{50} = 0.334, p<0.01), but it is not significantly related to compatible information system linkage and comprehensive accounting information presentation (β_{40} = 0.156, p>0.05; β_{60}= 0.163, p>0.05). Thus, hypotheses 8a and 8c are supported, but hypotheses 8b and 8d are not supported.

Information technology resources (ITR) is not significantly related to complete information collaboration (β_{31} = 0.127, p>0.05), accurate business information interpretation (β_{41} = 0.165, p>0.05), compatible information system linkage (β_{51} = 0.054, p>0.05), and comprehensive accounting information presentation (β_{61}= 0.116, p>0.05). Thus, hypotheses 9a, 9b and 9c are not supported.

The last antecedent variable, employee knowledge (EK) has a significant positive influence on compatible information system linkage and comprehensive accounting information presentation (β_{42} = 0.225, p<0.05; β_{62} = 0.265, p<0.01), but it is not significantly related to complete information collaboration and accurate business information interpretation (β_{32} = 0.132, p>0.05; β_{52} = 0.084, p>0.05). Thus, hypotheses 10b and 10d are supported, but hypotheses 10a and 10c are not supported.

In the past of moderating effect, all interaction among competitive pressure and three antecedents are predicted to have positive effect on all four dimensions of AIS excellence. The results found that competitive pressure has significant positive moderation effect on information technology resources and complete information collaboration (β_{45} = 0.222, p<0.05), accurate business information interpretation (β_{55} = 0.220, p<0.10), and comprehensive accounting information presentation (β_{65} = 0.282, p<0.05). Thus, Hypotheses 12a, 12c and 12d are supported, other hypotheses are not supported.

In summary of antecedent, the results indicated that executive vision and employee knowledge have direct effect on AIS excellence, but information technology resources will affect AIS Excellence only when the companies are in a pressure from the competition.

5. Contributions

5.1 Theoretical Contribution

This research contributes several theoretical implications. The first, it expands to the literature of AIS in an accounting information context. Secondly, this study confirms the previous research about the link between the AIS excellence dimensions and goal achievement. The last, this study extends the holistic view of AIS excellence that attempts to examine the relationship of AIS excellence and goal achievement.

5.2 Managerial Contribution

This research has potential implications for managers. The first, it helps managers to understand the holistic view of AIS excellence and uses adaptation to models for each unique firm. The second, managers must understand AIS excellence in the context of information and communication technology business in Thailand.

6. Conclusion

The purpose of this study is to examine the effect of accounting information system excellence on goal achievement via the mediating influences which include financial reporting efficiency, best accounting practice, and accounting information quality. Moreover, this study assigns executive vision, information technology resources, and employee knowledge as the antecedents of AIS excellence by using competitive pressure as the moderator of the relationship between the antecedents and AIS excellence. The results indicated that three of the four dimensions of AIS excellence have significant positive influence on accounting outcomes and accounting outcomes have significant positive influence on goal achievement. Also, the results found that executive vision and employee knowledge as the antecedents of AIS excellence. Finally, competitive pressure has significant positive moderation effect on information technology resources and AIS excellence.

This study has some limitations that should be mentioned. The first, the measurement of all constructs in this study is newly developed with some modifications, based on literature review. However, the measurement is not in-depth interview from firm's practitioners. As a result, some constructs do not have significant influences. The second, key informant in this study is accounting directors/managers. The limitation may occur when such key informant does not completely understand IT characteristics. Finally, the finding comes from a small size of participations.

According to the results and limitations, some constructs have inappropriate measurements. Future research should develop and modify with mixed method of inductive and deductive methodology, such as using the in-depth interview and face validation with real practitioners. To enhance the power of test, future research should try to analyze the larger sample.

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