

Accounting Information System Quality and Business Goal Achievement: An Empirical Evidence from Auto Parts SMEs in Thailand

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ประจักษ์จากธุรกิจ SMEs ประเภทชิ้นส่วนยานยนต์ในประเทศไทย

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Abstract

The purpose of this study was to examine the effect of accounting information system quality on business goal achievement via the mediating influences which include accounting information advantage, valuable decision making, and information usefulness effectiveness in the auto parts SMEs businesses of Thailand. Data were collected from 243 auto parts SMEs businesses in Thailand by questionnaire mail surveys and the key informant was the head of the accounting department. The response rate in this research was 22.58%. The ordinary least square regression was employed in this research. The results revealed that accounting information reporting integration was an essential component affecting valuable decision making, information usefulness effectiveness, and business goal achievement. Accounting transaction linkage competency had an effect on accounting information advantage and valuable decision making. Meanwhile, best accounting practice efficiency would help enhance accounting information advantage, and business goal achievement. Furthermore, accounting information trust orientation, and accounting information auditing capability only

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affected accounting information advantage, and information usefulness effectiveness respectively.

Keywords: Accounting Information system Quality, Accounting Information advantage, Valuable Decision Making, Information Usefulness Effectiveness, Business Goal Achievement.

บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาถึงผลกระทบของคุณภาพระบบสารสนเทศทางบัญชีต่อการบรรลุเป้าหมายของธุรกิจผ่านตัวแปรความได้เปรียบของข้อมูลทางการบัญชี, การตัดสินใจที่มีคุณค่า และประสิทธิภาพการใช้ประโยชน์จากข้อมูล โดยในการศึกษาครั้งนี้ได้รวบรวมข้อมูลจากธุรกิจ SMEs ประเภทผลิตขึ้นส่วนยานยนต์ในประเทศไทย จำนวน 243 ราย โดยใช้แบบสอบถามในการเก็บรวบรวมข้อมูลซึ่งมีหัวหน้าแผนกบัญชีของกิจการเป็นผู้ให้ข้อมูล อัตราการกลับในการศึกษาครั้งนี้อยู่ที่ 22.58% สถิติที่ใช้ในการวิเคราะห์คือ สมการถดถอยแบบกำลังน้อยสุด ผลการศึกษาพบว่า การบูรณาการรายงานข้อมูลทางการบัญชีเป็นปัจจัยที่มีสำคัญที่ส่งผลต่อการตัดสินใจที่มีคุณค่า, ประสิทธิภาพการใช้ประโยชน์จากข้อมูลและการบรรลุเป้าหมายของธุรกิจ ส่วนตัวแปรความสามารถในเชื่อมโยงรายการทางการบัญชีนั้นส่งผลต่อความได้เปรียบของข้อมูลทางการบัญชีและการตัดสินใจที่มีคุณค่า ในขณะที่ตัวแปรประสิทธิภาพการปฏิบัติทางการบัญชีที่ดีนั้นจะช่วยเพิ่มความได้เปรียบของข้อมูลทางการบัญชีและการบรรลุของเป้าหมายของธุรกิจ นอกจากนี้ตัวแปรการมุ่งเน้นความน่าเชื่อถือของข้อมูลทางการบัญชีและตัวแปรศักยภาพการตรวจสอบข้อมูลทางการบัญชีนั้นส่งผลกระทบต่อตัวแปรแค่เพียงในเรื่องของความได้เปรียบของข้อมูลทางการบัญชีและประสิทธิภาพการใช้ประโยชน์จากข้อมูลตามลำดับ

คำสำคัญ : คุณภาพระบบสารสนเทศทางการบัญชี, ความได้เปรียบของข้อมูลทางการบัญชี, การตัดสินใจที่มีคุณค่า, ประสิทธิภาพการใช้ประโยชน์จากข้อมูล, การบรรลุเป้าหมายของธุรกิจ

Introduction

An accounting information system is one of the most effective decision making tools in dealing with the complexity and uncertainty environment. Accounting information, which can be acquired from the effective accounting information system, may help managers to have more clarity of thought and reduce uncertainty before making decisions. Data quality issues are one of the critical concerns among organizations about today's business environment (Emeka-Nowkeji, 2012). Given that good or bad company's decision-making is dependent on the quality of information which can be obtained from accounting information systems. The better accounting information system quality is, it will create the greater quality of accounting information to support decision tasks. The accounting information system quality will generate

the quality of information, and then information quality will significantly lead to the better decision making and ultimately directly increase firms' performance (Bachmid, 2016). Thus, data quality is a key component of information quality because data quality is the heart of information quality; meanwhile, poor data quality results in poor information quality. A lack of accounting information quality will jeopardize the competitive advantage, and the insufficiency of information for comparison and prediction in the uncertain environment will endanger the quality of decision making (Fitriati & Mulyani, 2015). The information which is provided by each accounting information system from each firm is different because it depends on the quality of the accounting information systems of each firm. The usage of accounting information systems will facilitate decision making by providing useful information not only for efficient decision making, but also for the effective employment of the information in setting policies, firms' objectives, and goals. Therefore, accounting information systems significantly affect the managerial and organizational performance (Mim, 2016). Hence, the quality of information is an essential component, which will lead the firms to be more successful than competitors.

In addition, the requirements of the law determines whether small and medium enterprises are responsible for preparing the financial statements and paying taxes to the government, so, these businesses need to prepare financial reports. For this reason, accounting information systems are necessary and used in various businesses to assist in supporting managerial tasks, which will help achieve the effective performance. Meanwhile, the research in the area of accounting information system quality in the context of SMEs businesses in Thailand is quite scarce. Therefore, in the context of small and medium enterprises, the topic of accounting information system quality is interesting. Hence, to fulfill the gap in this research, so the research objective aimed to examine the effects of accounting information system quality on business goal achievement: particularly, the study focused on the effects of accounting transaction linkage competency, accounting information reporting integration, accounting information trust orientation, best accounting practice efficiency and accounting information auditing capability. Furthermore, this research could make three contributions to the literature on accounting information system quality. Firstly, this research would help expand the theoretical contributions of accounting information system quality, with the information richness theory which is employed to explain an impact of accounting information system quality on business goal achievement in a conceptual model. Secondly, this research proposes five new dimensions of accounting information system quality which were rarely included and different from previous research. Finally, this research would illustrate and

provide the important guidelines of accounting information system quality, which can help the firm stimulate managers' concerns on accounting information system implementation and the usefulness of accounting information systems, which would lead to effective achievement of business goals.

Literature review

Accounting Information System Quality

Accounting information systems have been developed to assist accountants, with the wider scope of accounting professions, to deal with the dynamic of economic and world social change. There are various types of systems which serve all large, medium, and small companies' desires. Some of these systems are built for generally basic use, while others are customized to fit with the specific business nature, for example, small-sized or specific characteristics of businesses. However, all computerized accounting systems can enhance functionality of various departments and generate the timely relevant information to respond to the users such as rising just in time accounting information (Miller, Bunn, & Noe, 2016). For information richness theory employed in this research, was defined by Daft & Lengel (1986) as the ability of information to change understanding within a time interval. The first assumption of this theory is that organizations process information to reduce uncertainty and ambiguity. Hence, the concept of information richness in this study refers to the quality of information that is produced by accounting information system quality. In recent years the quality of information is intensively concerned. The quality requirement seems more and more often focused on accounting professional publication, which can be implied that the quality requirement is concerned in accounting disciplines (Pál 2010). The accounting information system is continuously developing to respond with the dynamic economic surroundings, so it is a continuously improved system which is created to deal with an environmental change. Moreover, it is recognized as an adaptive system which is able to accommodate suitable systems' function to enhance the better operational performance. As has been mentioned above, the demand of accounting information system development is increasing to respond with the modernization of information system to fulfill and be congruent with world businesses' conditions. According to the growth and change in demands, improvement of system quality is regarded as an essential aspect which will lead the firms to meet firms' competitiveness by harvesting the advantages from modern information technology (Tóth, 2012).

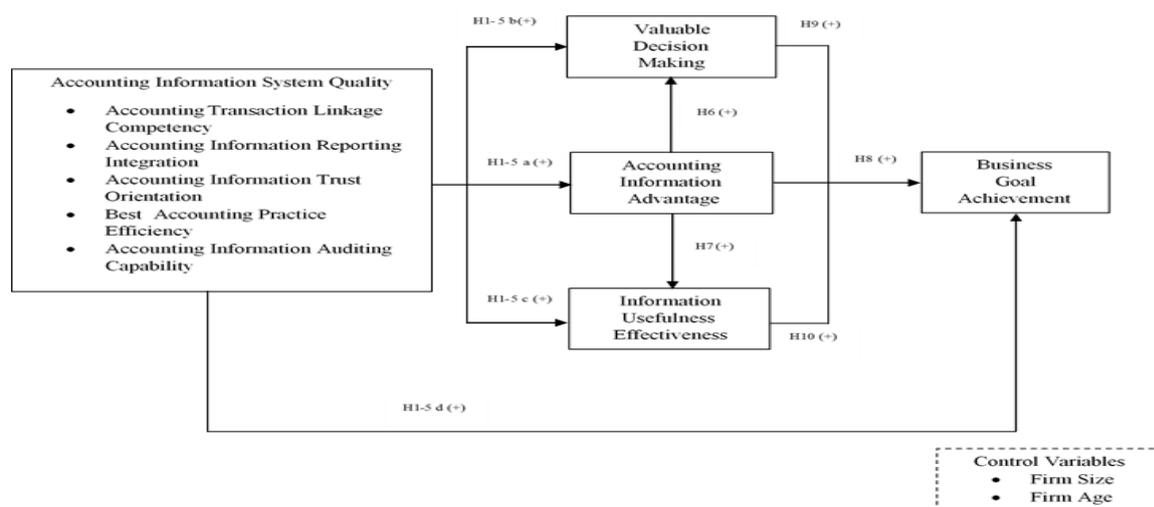


Figure (1) Conceptual Model of Accounting Information System Quality and Business Goal Achievement

Therefore, accounting information system quality can be referred to a computer-based system which operates the function of collecting business transactions, preparing comprehensive accounting information, and tracking accounting activities from various departments to generate the valuable information for an organization. Accounting information system quality comprises five dimensions, namely, accounting transaction linkage competency, accounting information reporting integration, accounting information trust orientation, best accounting practice efficiency, and accounting information auditing capability.

Accounting Transaction Linkage Competency

Accounting transaction linkage competency (ATL) is defined as firms' abilities to collect, classify, and record business transactions from various departments across the organizations, which will be based on the generally accepted accounting principles. Accounting data are a business transaction that is done through the procedure of recording data. Inaccurate data including, invalid and wrong data are obtained from various causes, such as different data sources, ineffective data transference, and incorrectly recording business transactions (Kahn, Strong, & Wang, 2002). Therefore, record keeping is the key process to success for all organizations. Thus, accounting transaction linkage competency plays a vital role in gathering data and recording business transactions based on accounting practice processes, and generally accepted accounting principles (GAAP). The linkage of business transactions into a complete and accurate recording is an essence cause of accuracy which will lead to enhance a quality of accounting information (Assenso-Okofu, Ali, & Ahmed, 2011). Hence, in the firms with an inter-organizational network, transaction linkage competency is an

essential process to generate the completeness and accuracy of day-to-day businesses' information, which influences information-processing capability and ultimately leads to effective decision making (Khachlouf, Quélin, & Soparnot, 2014). Thus, the hypothesis is proposed as follows:

H1: Accounting transaction linkage competency has a positive effect on a) accounting information advantage, b) valuable decision-making, c) information usefulness effectiveness, and d) business goal achievement.

Accounting Information Reporting Integration

Accounting information reporting integration (ARI) refers to data gathering, covering all operational information in both of financial and non-financial information from both of internal and external circumstance to enhance the better understanding of relevant users. According to the traditional GAAP-based accounting system, it seems that insufficient information is provided and ineffectively responds to modern managers' needs, because modern managers need not only financial information, but also nonfinancial information to support their decision tasks. Therefore, an aggregation of correlated information in both of financial and nonfinancial aspects seems to respond managers' needs and can overcome the drawbacks of traditional information reporting. With the aforementioned cause, the integrated reporting which merges financial and nonfinancial information such as sustainability information of the firms into one report is emerging. Therefore, looking for additional information can decrease the imperfect attributes, namely, vagueness, hesitation, and incompleteness, which may enhance the quality of information (Ben-Amor, Zaras, & Aguayo, 2017).

In addition, the accounting profession is more concerned about involvement of additional information; thus, it seems that the combination of relevant information both financial and nonfinancial, is a crucial perspective. Therefore, accounting reporting aggregation, rather than reporting the underlying information directly, is a key feature of the desirable accounting systems (Fan & Zhang, 2012). Furthermore, additional information can support more efficient information acquisition and more accurate performance of decision makers (Dilla, Janvrin, & Raschke, 2010). Therefore, the accuracy of collecting and processing the initial transactions to final reporting will generate the valuable information to support decision tasks (Rekarti & Doktoralina, 2017). Thus, the hypothesis is proposed as follows:

H2: Accounting information reporting integration has a positive effect on a) accounting information advantage, b) valuable decision-making, c) information usefulness effectiveness, and d) business goal achievement.

Accounting Information Trust Orientation

Accounting information trust orientation (ATO) is defined as the focus on providing reliable information, which includes; completeness, free from bias, conservatism, and reflects economic circumstance. Reliability is recognized as a vital attribute of useful information which enhance the quality of decision making. The importance of trusting information from a financial report is essential since the information presented in the report is used by many groups of people, for instance, managers, investors and governments. Considering the aforementioned reasons, it appears that information trust is a key characteristic of information quality because if information cannot be trusted, it will become useless for all users. Thus, trustable information of financial reports is an important characteristic. Therefore, trustable financial reports will affect and enhance the decision making' quality (Radu, Bordeianu, & Paraschivescu, 2012). Moreover, missing of quality of financial information will jeopardize the organizational performance (Gorla, Somers, & Wong, 2010). Therefore, it seems that reliability and authenticity are considerably needed as a key to ensure information quality for all businesses, including SMEs businesses (Cunningham, 2012). Thus, information trust, a component of information quality, is an important aspect which will lead the firms to enhance the effectiveness of firms' operation including, decision making, planning, directing, and controlling functions (Delbaere & Ferreira 2007). Thus, the hypothesis is proposed as follows:

H3: Accounting information trust orientation has a positive effect on a) accounting information advantage, b) valuable decision-making, c) information usefulness effectiveness, and d) business goal achievement.

Best Accounting Practice Efficiency

Best accounting practice efficiency (BAP) refers to the suitable way in which organizations carry out their best and fittest functions, appropriate methods, proper policies and suitable procedures, going hand in hand with generally accepted accounting principles, and accounting standards. The optimal accounting policies such as conservative aggregation in accounting often improve the overall quality of information produced, and then enhance the welfare of accounting information users (Fan & Zhang, 2012). In general, the literature on ERP systems and the incorporation of best practices into the ERP design lead firms to have operational efficiency. Hence, best accounting practice is one of the crucial component which enhance the quality of organizational performance (Mayere, Grabot, & Bazet, 2008). The prior research has revealed that when setting standards, these will provide the good results for both internal and external relevant users. When compatible functions of accounting occur, the benefit results increase and are not only useful for supporting investors decision tasks, but also

provide managers with incentives to manage as owners' best interest manner (Eierle & Schultz, 2013).

Therefore, best practice can generate more advantages and enhance the firms' competency. According to prior research, it was illustrated that best practices could enhance the competency of the firms and these are reflected into three areas, including, the ability to analyze information, proficiency in organizing and reporting information, and capability of using information (Campion et al., 2011). Recent researches' findings have revealed that robust financial management practice is associated with better loan performance of micro-financial institutions (Nkundabanyanga et al., 2017). Therefore, it can be implied that best accounting practice efficiency is associated with the firms' competitive advantage and firms' performance. Thus, the hypothesis is proposed as follows:

H4: Best accounting practice efficiency has a positive effect on a) accounting information advantage, b) valuable decision-making, c) information usefulness effectiveness, and d) business goal achievement.

Accounting Information Auditing Capability

Accounting information auditing capability (AAC) is defined as the systems' ability to track, verify, and monitor all accounting activities to identify problems or the risky operational process in the accounting process. To certify operational performance, reliability of financial reports, regulation compliance, and the perspective of controlling should be constructed into the information system (Yang, Lin, & Koo, 2011). The efficient traceability process can ensure the correction of the information and generate more valuable decision making. Considering prior research, it has been found that the intensive focus on internal control compliance is one essential cause which contributes to data and information quality, which in turn enhance the decision making effectiveness (Neely & Cook, 2011). The concentration of traceability strategic can facilitate the information' flow in the firms. Moreover, the traceability process will lead the firms to gain more competitiveness by generating reliable information and employing these superior characteristics of information to support their decision tasks (Durugbo, Tiwari, & Alcock, 2014). Furthermore, more concentration on continuous data checking, continuous data monitoring, and continuous controlling, are the key manners to assure firms' operation, which are based on best practice and help several firms to diminish the errors and dysfunctions in accounting processes (Shin, Lee, & Park, 2013). Therefore, to respond the stakeholders' needs, monitoring is recognized as an important component of worldwide management system, which

helps the firms prevent and find businesses' deficiencies (Dascălu, Marcu, & Hurjui, 2016). Thus, the hypothesis is proposed as follows:

H5: Accounting information auditing capability has a positive effect on a) accounting information advantage, b) valuable decision-making, c) information usefulness effectiveness, and d) business goal achievement.

Accounting Information advantage

Accounting information advantage (AIA) is defined as the superior characteristics of accounting information which includes; on-time/punctuality, accuracy, clarity and differentiation, which can enhance the quality of decision making, analyzing, evaluating and predicting the dynamic circumstances. Information advantage refers to integration of the data with a variety of different information and linking data from diverse parties in a systematic and concrete way so as to accurately and reliably fulfill the objectives of the site and decide the activities of various options better than the competition, causing the successful ongoing operation of the organization (Chitmun & Ussahawanitchakit, 2012). Therefore, a miscellaneous combination of information stimulates the potential for the true integration of information to link up and create a competitive advantage over competitors (Jafari-Eskandari et al., 2010). The recent research has revealed that the advantages of information comprise several components such as information's trust for making decision and more relevant information, this information is required by executive and senior managers (Visvanathan & Denisha, 2017). Therefore, under the high pressure of competition and dynamic circumstance, several businesses must improve and develop the information management ability which is associated with not only internal factors, but also external factors to attain both short-term and long-term firms' objectives (Naranjo-Gil & Hartmann, 2006). Thus, the hypothesis is proposed as follows:

H6: Accounting information advantage has a positive effect on valuable decision-making.

H7: Accounting information advantage has a positive effect on information usefulness effectiveness.

H8: Accounting information advantage has a positive effect on business goal achievement.

Valuable Decision Making

Valuable decision making (VDM) refers to the success of optimal choices among various alternatives to support the organization to attain their goals. The term of decision making is described as evaluating or prioritizing all possible alternatives (Malakooti, 2012). Simply speaking, decision making is performed by decision makers, who employ information which is reliable, timely, and accurate, by selecting the best alternative among other choices. Valuable decision making can enhance the organizations' proficiency through the effective processes which are, specifying the problems, collecting and sharing relevant information, generating various ideas and solutions, and evaluating the outcomes of each choice. Therefore, for the aforementioned statements, it will facilitate the firms' decision making by selecting the most suitable alternative to deal with problems, which suitably match the firms' expectation at the present time (Parmigiani, 2012). Insight understanding in the possible alternatives structured as well as unstructured data is the more essential for valuable decision making, which will help attain the set goals (Frisk, Lindgern, & Mathiassen, 2014). Thus, the hypothesis is proposed as follows:

H9: Valuable decision-making has a positive effect on business goal achievement.

Information Usefulness Effectiveness

Information usefulness effectiveness (IUE) refers to the advantage from the use of information for effectively planning, monitoring, forecasting, directing and controlling organizations' operation in order to achieve the set goals. The effective use of information is crucial for firms to compete successfully in the highly competitive markets. To gain more competitive advantage than competitors, efficient planning and forecasting are the key proficiency which is combined into the quality management perspective. For example, when efficient planning and forecasting occur, they will lead the firms to meet an optimal production, namely precious pricing, product quality, the rightly time to market, and lowest cost, and these lead the firms to meet outstanding profitability and enhance their competitive advantage (Pansuppawatt & Ussahawanitchakit, 2011). The efficient use of information is a crucial issue which is accomplish in the modern market, and this issue is long supported by organization and management scholars (Foss & Rodgers, 2011). Therefore, put it simply, accounting information system captures and provides information about economic circumstances, and if the precious information is generated, managers will gain the benefits by utilizing this information. The efficient use of information can help enhance analysts' analytical ability. Therefore, to complete with successfully in an intensively competitive

market, firms should concentrate more attention on efficient use of information. Thus, the hypothesis is proposed as follows:

H10: Information usefulness effectiveness has a positive effect on business goal achievement.

Business Goal Achievement

Business goal achievement (BGA) refers to the operational outcomes which enable the firm to meet the objective setting by linking both mission and vision of their organization in the arm of accuracy, timely, and effectively. Goal achievement refers to the representation of the final process in operation or in obtained results which enable the firm to achieve the objectives set by linking to the missions, visions, policy and strategies (Zaccaro & Klimoski, 2011), and is set and accepted by top leaders. It is a strategy which includes challenging statements and ideas that can lead to effective implementation in all functions (Hunt, 2012), influences the firm's competencies to achieve their target goal (Koste & Malhotra, 2000). Therefore, the ability to indicate what is needed to achieve the system's goals and to provide the necessary information to support better decision making is essential to reduce costs and risks at every level in a manufacturing system.

Methods and Measurement

Sample and Data Collection Procedure

The auto parts SMEs in Thailand were targeted as the population of this study. The questionnaire mail survey was employed to collect the data. The sample data were obtained from the database of the Office of SMEs Promotion (OSMEP) (www.sme.go.th). The returned and usable were 243 samples and the key informant was head of accounting department. In this study the response rate was approximately 22.58%.

To test non-response bias, working capital, average income of firm, total assets, number of employees and the period of time in operating business were compared between early and late responses by t-test. The results revealed that non-response bias problem did not occur (Armstrong & Overton, 1977). On validity and reliability measurement, two academic experts who have experience in this area reviewed the instrument to ensure that the questionnaires used suitable wordings, and all constructs are adequate to cover the content of the variables. Furthermore, the research shows that factor loadings of each item of all variables were between 0.742 and 0.955 (>0.4) and statistically significant, which indicated the acceptable construct validity (Nunnally & Berstein, 1994). Meanwhile, reliability value -

Cronbach’s alpha coefficients have a value between 0.814 and 0.934, which exceed the acceptable cut-off score (<0.7) (Hair et al., 2010).

Statistical Techniques

This research employed the ordinary least squares (OLS) regression analysis to examine all hypothesized relationships provided in prior sessions presented as follows:

$$\text{Equation 1: AIA} = \alpha_1 + \beta_1\text{ATL} + \beta_2\text{ARI} + \beta_3\text{ATO} + \beta_4\text{BAP} + \beta_5\text{AAC} + \beta_6\text{SIZE} + \beta_7\text{AGE} + \varepsilon$$

$$\text{Equation 2: VDM} = \alpha_2 + \beta_9\text{ATL} + \beta_9\text{ARI} + \beta_{10}\text{ATO} + \beta_{11}\text{BAP} + \beta_{12}\text{AAC} + \beta_{13}\text{SIZE} + \beta_{14}\text{AGE} + \varepsilon$$

$$\text{Equation 3: IUE} = \alpha_3 + \beta_{15}\text{ATL} + \beta_{16}\text{ARI} + \beta_{17}\text{ATO} + \beta_{18}\text{BAP} + \beta_{19}\text{AAC} + \beta_{20}\text{SIZE} + \beta_{21}\text{AGE} + \varepsilon$$

$$\text{Equation 4: BGA} = \alpha_4 + \beta_{22}\text{ATL} + \beta_{23}\text{ARI} + \beta_{24}\text{ATO} + \beta_{25}\text{BAP} + \beta_{26}\text{AAC} + \beta_{27}\text{SIZE} + \beta_{28}\text{AGE} + \varepsilon$$

$$\text{Equation 5: VDM} = \alpha_5 + \beta_{29}\text{AIA} + \beta_{30}\text{SIZ} + \beta_{31}\text{AGE} + \varepsilon$$

$$\text{Equation 6: IUE} = \alpha_6 + \beta_{32}\text{AIA} + \beta_{33}\text{SIZ} + \beta_{34}\text{AGE} + \varepsilon$$

$$\text{Equation 7: BGA} = \alpha_7 + \beta_{35}\text{AIA} + \beta_{36}\text{VDM} + \beta_{37}\text{IUE} + \beta_{38}\text{SIZ} + \beta_{39}\text{AGE} + \varepsilon$$

Results and Discussion

Table 1 shows descriptive statistics and correlation matrix for all variables. Correlation coefficients of variables range from 0.230-0.846. Furthermore, variance inflation factors (VIF) in this study range from 1.066 to 4.380, well below the cut-off value of 10 (Hair et al., 2010). Hence, multicollinearity problems did not occur.

Table 1 Descriptive Statistics and Correlation Matrix

Variables	ATL	ARI	ATO	BAP	AAC	AIA	VDM	IUE	BGA
Mean	4.18	4.16	4.19	4.09	4.20	3.96	3.96	4.02	3.98
S.D.	.479	.502	.499	.569	.517	.517	.478	.503	.585
ATL	1.000								
ARI	.667***	1.000							
ATO	.694***	.846***	1.000						
BAP	.465***	.573***	.561***	1.000					
AAC	.590***	.678***	.713***	.651***	1.000				
AIA	.526***	.558***	.589***	.329***	.496***	1.000			
VDM	.418***	.418***	.374***	.230***	.380***	.680***	1.000		
IUE	.401***	.473***	.413***	.295***	.476***	.672***	.801***	1.000	
BGA	.379***	.548***	.522***	.319***	.420***	.631***	.611***	.684***	1.000

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

Table 2 shows the results of the OLS regression analysis for the first four equations.

Table 2 Results of Regression Analysis^a

Independent Variables	Dependent Variables			
	AIA (1)	VDM (2)	IUE (3)	BGA (4)
ATL	.182** (.075)	.247*** (.085)	.105 (.082)	-.017 (.079)
ARI	.144 (.100)	.252** (.114)	.336*** (.109)	.359*** (.105)
ATO	.253** (.105)	-.115 (.121)	-.162 (.166)	.175 (.111)
BAP	.112** (.054)	.013 (.062)	.028 (.060)	.117** (.057)
AAC	.074 (.076)	.140 (.087)	.291*** (.084)	.028 (.081)
SIZ	.141 (.106)	-.022 (.122)	.105 (.117)	-.015 (.112)
AGE	-.152 (.104)	.038 (.119)	-.075 (.114)	-.174 (.110)
Adjusted R ²	.379	.204	.265	.302
MaximumVIF	4.380	4.380	4.380	4.380

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

For the first dimension, accounting transaction linkage competency had a significant positive influence on accounting information advantage ($\beta_1 = 0.182$, $p < 0.05$), and valuable decision making ($\beta_8 = 0.247$, $p < 0.01$). The prior research, revealed that the growth of technology led to enhance the computing power which in turn resulted in more accurate and timely business transaction processing, and then improved the availability of information from units and overcome the large amount of business transaction information. For the aforementioned processes, it can simply be put that if consistence of information across all units and products occurs, it will ultimately support decision tasks and enhance the efficiency of firms' management (Rodriguez & Spraakman, 2012). **Thus, Hypothesis 1a and 1b are supported.** Meanwhile, it did not have any influence on both information usefulness effectiveness ($\beta_{15} = 0.105$, $p > 0.10$), and business goal achievement ($\beta_{22} = - 0.017$, $p > 0.10$).

Congruent with the prior research which conducted in Malaysia, the present study indicated that SMEs are still facing the financing provision problems in the relation to a lack of qualified by banks' criteria. Thus, in the investors' perspective, it seems that SMEs' accounting systems were not transparent enough to be relied on for making an investment (Ramlee & Berma, 2013). Therefore, under the situation in which SMEs are still encountering the aforementioned problems, accounting linkage competency does not seem to affect information usefulness effectiveness and business goal achievement. **Thus, Hypothesis 1c and 1d are not**

supported.

As for the second dimension, accounting information reporting integration had a significant positive influence on three consequence variables: valuable decision making ($\beta_9 = 0.252$, $p < 0.05$), information usefulness effectiveness ($\beta_{16} = 0.336$, $p < 0.01$), and business goal achievement ($\beta_{23} = 0.359$, $p < 0.01$), respectively. Therefore, the integrated information is a key component of IS function, which plays an important role as a facilitator of effective information use. Furthermore, a strong information culture in organizations is one of the essential components which improve integrated information delivery and effective use, which ultimately leads to the superior performance (Kettinger, Zhang, & Chang, 2013). **Thus, Hypothesis 2b, 2c and 2d are supported.** Meanwhile, it did not have any influence on accounting information advantage ($\beta_2 = 0.144$, $p > 0.10$). According to Purwati, Suparlinah, & Putri, (2014) it was revealed that several SMEs firms complied with the accounting standards and had interests in using accounting software to prepare financial statements. One possible reason is that when several firms, including SMEs, comply with the accounting standards, information, which are generated into financial reports, is based on the same basis and leads to enhance a comparable ability. For this reason, this information seems to have the minimum requirements characteristics, and does not have any obvious differences from another firms.

Thus, Hypothesis 2a is not supported.

For the third dimension, accounting information trust orientation only had a significant positive influence on accounting information advantage ($\beta_3 = 0.253$, $p < 0.05$). According to the prior research, the reliability of information is needed because information trust, which is categorized as one component of information quality attributes, is important. Hence, information quality is critical because information cannot be used if it cannot be trusted (Cunningham, 2012). **Thus, Hypothesis 3a is supported.** Still, it did not have any

impact on the rest of consequence variables which are, valuable decision making ($\beta_{10} = -0.115$, $p > 0.10$), information usefulness effectiveness ($\beta_{17} = -0.162$, $p > 0.10$), and business goal achievement ($\beta_{24} = 0.175$, $p > 0.10$). According to the previous research, several SMEs in Thailand are still facing the problem of the hindrance to access external financial source because of the insufficiency of investment readiness. In addition, scarcity of essential information and knowledge of their businesses to convince financial providers is still a core obstacle of SMEs in Thailand to access financial funds (Sarapaivanich & Kotey, 2006). Therefore, in the context of SMEs in Thailand, accounting information trust orientation seem weak. **Thus,**

Hypothesis 3b, 3c and 3d are not supported.

Best accounting practice efficiency as the fourth dimension had a significant positive influence on accounting information advantage ($\beta_4 = 0.112$, $p < 0.05$), and business goal achievement ($\beta_{25} = 0.117$, $p < 0.05$). Consistent with the prior research, it was found that when the SMEs firms had a suitable combination between management tools or concepts, such as economic value added, and accounting practice, these would render firms' information attributes more outstanding and ultimately affect their performance (Bahri, St-Pierre, & Sakka, 2011). **Thus, Hypothesis 4a and 4d are supported.** Meanwhile, best accounting practice efficiency did not have any effect on valuable decision making ($\beta_{11} = 0.013$, $p > 0.10$), and information usefulness effectiveness ($\beta_{18} = 0.028$, $p > 0.10$). According to the prior research, which compared the deficiency of product costing practices between large versus small and medium sized, SMEs did not have the resources to make major investments in their product costing systems. Thus the unsuitable product cost allocating approach occurred and ultimately led the SMEs to meet an inefficient practice of product costing (Brierley, 2011). Furthermore, the main reasons for the ineffectively use of traditional and modern best accounting practices, such the management accounting practices which include high costs of implementation, and deficient of management commitment or financial constraints, are identified as the problems of SMEs businesses (Cuzdriorean, 2017). **Thus, Hypothesis 4b and 4c are not supported.**

Finally, the last dimension, accounting information auditing capability only had a significant positive effect on information usefulness effectiveness ($\beta_{19} = 0.291$, $p < 0.01$). Increasing the need of continuous monitoring of transactions is a vital role. Therefore modern techniques, and accounting activity' tractability process must be employed, so, internal control processes will be appropriate for an enterprise system (Kanellou & Spathis, 2011). Therefore, when firms emphasized the approach of enhancing accounting information auditing

capability, it will improve the ability of checking and verifying processes of firms and generate the information for planning, controlling, monitoring, and directing, and then, this information will promote the effective use of information. **Thus, Hypothesis 5c is supported.** Meanwhile, accounting information auditing capability did not have any effect on the rest variables: accounting information advantage ($\beta_5 = 0.074, p > 0.10$), valuable decision making ($\beta_{12} = 0.140, p > 0.10$), and business goal achievement ($\beta_{26} = 0.028, p > 0.10$). According to recent research, larger firms tended to have greater maturity of accounting practices for instance, the deviation between management accounting knowledge and practice (Raul, Maria, & Luis, 2016). In light of the aforementioned evidence, it seems that accounting information auditing capability in the SMEs context seem to be weak, and then it did not affect the accounting information advantage, valuable decision making, and business goal achievement. **Thus, Hypothesis 5a, 5b and 5d are not supported.**

Table 3 shows the results of OLS regression analysis for last three equations.

Table 3 Results of Regression Analysis^a

Independent Variables	Dependent Variables		
	VDM (5)	IUE (6)	BGA (7)
AIA	.688*** (.048)	.674*** (.048)	.301*** (.064)
VDM			.056 (.079)
IUE			.440*** (.078)
SIZ	-.101 (.097)	-.011 (.099)	-.154 (.092)
AGE	.137 (.097)	.054 (.098)	-.099 (.092)
Adjusted R ²	.461	.445	.523
Maximum VIF	1.066	1.066	3.146

***p<.01, a Beta coefficients with standard errors in parenthesis.

The result indicated that accounting information advantage had a positive significant effect on valuable decision making ($\beta_{29} = 0.688, p < 0.01$), information usefulness effectiveness ($\beta_{32} = 0.674, p < 0.01$), and business goal achievement ($\beta_{35} = 0.301, p < 0.01$). According to the prior research, accounting information advantage, provided by the accounting information system quality, can help to not only identify strengths and weaknesses, threats and challenges in the internal and external environment but also seek opportunities, alternatives and trade off the available choices in order to be able to select the optimum alternative of the organizational choices and ultimately lead the firms to attain their organizational goal (Maswadeh, 2016). **Thus, Hypothesis 6, 7, 8 are supported.**

The result showed that valuable decision making did not have any influence on business goal achievement ($\beta_{36} = 0.056, p > 0.10$). In the context of Thailand, SMEs are still facing several problems, which are identified by the Institute for Small and Medium Enterprises, and these problems can be summarized as follow, lack of enterprises' management style, ineffectiveness in administration and management, insufficient insightful knowledge about SMEs' businesses, deficiency of production management effectiveness, and insufficient encouragement from government. With the aforementioned problems, it seems that SMEs' managers do not make decision efficiently; therefore, the valuable decision making did not occur in the situation of firms which still have the problems of management. Taking into account recent research, it was found that top managers who are supposed to use performance information were inefficient when making decisions, owing to the fact that motivations and obstacles of using performance information were identified as a key barrier of achieving business goals (Cepiku et al., 2017). For the aforementioned reasons, **Hypothesis 9 is not supported.**

Finally, the result revealed that information usefulness effectiveness had a significant positive effect on business goal achievement ($\beta_{37} = 0.440, p < 0.01$). Congruent with the prior research, information quality and credibility of information source had a significant influence on information usefulness, and then led the firms to attain their set goals (Peng et al., 2016). According to the information usefulness effectiveness in the area of exporting businesses, the effectiveness of export information acquisition and absorption valuable of information in SMEs businesses reflect the richness of their firms' information source, and this information is exploited in the various forms, for instance, seeking and developing of new export market and continuously improvement businesses' know-how. Consequently these causes will lead the firms to attain their business goals (Descotes, & Walliser, 2011). According to the recent

research, which focused on Thai SMEs, it was found that usefulness of information affected the business effectiveness (Avirutha, 2017). **Thus, Hypothesis 10 is supported.**

Conclusion and Recommendation

The purpose of this study was to examine the effect of accounting information system quality on business goal achievement via accounting information advantage, valuable decision making, and information usefulness effectiveness. In this study five dimensions of accounting information system quality were proposed, namely, accounting transaction linkage competency, accounting information reporting integration, accounting information trust orientation, best accounting practice efficiency, and accounting information auditing capability.

The results indicate that accounting information reporting integration was the most important variable, which affected valuable decision making, information usefulness effectiveness, and business goal achievement. In the next sequential, accounting transaction linkage competency had a positively effect on information usefulness effectiveness, and business goal achievement, meanwhile, best accounting practice efficiency affects valuable decision making, and information usefulness effectiveness, respectively. Therefore, accounting information reporting integration, accounting transaction linkage competency, and best accounting practice efficiency were the critical components. For this reason, firm should pay the more attention on accounting information reporting integration, since integration of monetary and non-monetary information inside and outside the firms into their reports is the key characteristic of the accounting information reporting integration. Hence, to reduce the misunderstanding of managers, SMEs firms should be more focused on the supplementation of accounting information not only financial information, but also non-financial information and both inside and outside firms' information. Therefore, the supplementary reports such executive summary reports, industry trend analysis reports, are essential to reduce the misunderstanding of managers when making decision.

Furthermore, the results indicated that accounting information advantage was the most essential variable, which helped enhance more valuable decision making, information usefulness effectiveness, and ultimately led to attainment of business goal achievement. Thus, firms should pay more attention to how the accounting information is generated in the area of accuracy, timeliness, differentiation, and congruence with the environmental instability, which will lead to enhance the superior advantage of firms' accounting information characteristics.

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