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THE INFLUENCE OF MODERN ACCOUNTING SYSTEM ON ORGANIZATION MANAGEMENT EFFICIENCY: CASE STUDY OF SMEs IN THAILAND

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Abstract
The purpose of this study is to examine the influence of modern accounting system on organization management efficiency. Modern accounting system is consist of fast accounting process increasing functionality better external reporting and real time reporting. Using the resource-based view of the firm perspective, modern accounting system is one of the important firm resources that can help firm transform a shot-run competitive advantage into a sustained competitive advantage by improving organization management efficiency. The data is collected from SMEs in Thailand via mails. The results of OLS regression reveal that all dimensions of modern accounting have positively effect on organization management efficiency. Contributions, suggestions for future research and conclusions are also presented in the last part.

Keywords: *CAATs implementation success; IT competency of internal auditor; Information system efficiency; Internal audit efficiency*

1. INTRODUCTION

The current economic environment has been changed in several respects from the past such as the expansion of business enterprises that are either larger or more complicated organizational structure and increasing of the businesses number with more than 18.46% in the year from 2010 to 2015 (Department of Business Development, 2015), especially Thailand's small and medium enterprises (SMEs), which are businesses that receive support from the government in terms of funding, the body of knowledge in business development as well as the promotion and distribution of products to supply these businesses. The Office of SMEs Promotion (OSMEP) has been prepared the situation report of SMEs of Thailand for the year 2012 presented by the trend in recent years which has demonstrated the stability of SMEs with all the new registration and the cancellation or closure of many businesses compared to the previous year. The report shows the number of businesses that have closed or canceled up to 11%.

There are several factors that make these businesses shut down such as problem of the cost from the government's labor policies, economic stagnation in the whole year round, the operator has the ability to produce, but lack of knowledge of business operations. In particular, knowledge about tax and accounting including the use of accounting information for management and operations decision making. (The Office of SMEs Promotion, 2013).

These reports reveal the need and the importance of accounting information on the success of the business. There are two roles of accounting information including of decision influencing role and decision facilitation role. In decision influencing role, the accounting information is used for performance evaluation and decision facilitating role, accounting information helps to improve the action of manager choice through better-informed effort (Williams and Seaman, 2002, Tiessen and Waterhouse, 1983). As a result, the modern accounting system is very important in order to produce useful accounting information. From the foregoing, this research aims to test the effect of modern accounting system on organization management effectiveness. The specific question is how modern accounting system can help organization management of Thailand's SMEs?

The remainder of this study is organized as follows. First, the theoretical foundation and literature review of relationship between modern accounting system and organization management effectiveness and hypotheses development. Second, the research methods used to test the hypotheses are explained. Third, the results derived from 118 accounting managers of Thai SMEs are indicated and their reasonable discussions with existing literature supports are shown. Finally, the study concludes by discussing implications for theory and practice, identifying limitations of the study, and providing suggestions and directions for future research.

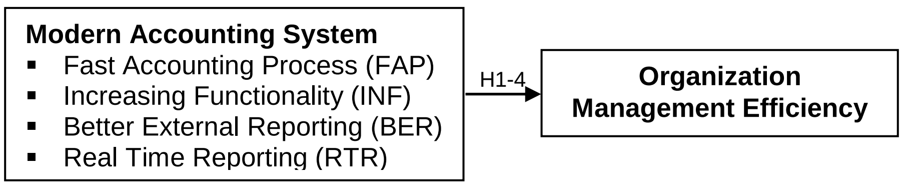
2. THEORETICAL FOUNDATION

2.1The Resource-Based View of the Firm (RBV)

The resource-based view of the firm focuses on how firm transforms a shot-run competitive advantage into a sustained competitive advantage which has the valuable resources. The nature of valuable resources is heterogeneous and not perfectly mobile (Penrose, 1959; Barney, 1991). The valuable resource reached a sustainable competitive advantage of the firm have to be unique resources which have the characteristic of being rare, valuable, inimitable, and non-substitutable. It means the resources which a firm holds must not be easily bought, transferred or copied. Concurrently they add value to a firm as being rare (Barney, 1991). In addition, firm resources can be classified into resources and capabilities (Day, 1994). They are core to creating competitive advantages for the firms (Grant, 1991). Resources can be separated into tangible assets and intangible assets such as financial, technology, knowledge based and human capital while capabilities are firm specific and used to utilize the assets within the firm such as implicit processes to transfer knowledge within the firm (Maijoor and Wittleloostuijn, 1996; Makadok, 2001). However, the firm tries to use valuable, heterogeneous, rare and inimitable resources in order to improve and create sustainable competitive advantages of the firm through capabilities (Capron and Hulland, 1999).

Modern accounting system is one of the important firm resources. The integration between information technology and accounting improve the efficiency of accounting system. It helps to collect and assess large amount of financial and nonfinancial information rapidly, computed and generate comprehensive information such as segment report, market share and etc., and prepare real-time reporting. Furthermore, internal and external users receive more relevant information lead to make a better decision. As a result, firm can achieve superior performance. This study, focuses on the benefit of modern accounting system which help firm transform a short run competitive advantage into a sustained competitive advantage by increasing organization management efficiency and how to implement modern accounting system and benefit of computer assisted audit tools successfully, in order to help the firm maintain stability in the highly competitive market.

Figure 1
Relationship Model and Hypothesis of Relationship between
Modern Accounting System and Organization Management Efficiency



3. LITERATUR REVIEW AND HYPOTHESES DEVELOPMENT

3.1 Modern Accounting System

Accounting system is used by company to measure the financial performance and evaluate past performance, present condition and future prospects of the company (Ghasemi et al., 2011). The development of technology has changed the accounting system from the document based accounting to electronic based accounting. The transaction like sales, purchases and other activities of the company are process and store in electronic form (Guney, 2014; Braun and Davis, 2003; Warren and Smith 2006). As a result, accounting programs are developed in order to generate, compute, authenticate, store, and sort transactional data (Chou, Du and Lai, 2007). The size of operation and number of user are the criteria of the company to choose the accounting program such as MNEs choose system-wide software packages, such as an enterprise resource planning system. The IT networks and enterprise resource planning system are significant benefit to accountants, it helps accountants to carry out simple transaction such as pursuit of debts and receivables, calculation of salaries, data invoicing, stock records, and customer records (Guney, 2014). In addition, it helps to calculate the comprehensive numerical and convey more comprehensive information such as segment report, market share report and etc. Furthermore, the accounting program that automatic update information in the databased helps to prepared monthly, quarterly, year-end financial reports and special tax report rapidly. As a result, accounting system is developed from traditional accounting system (document based) to modern accounting system (electronic based). Thus, the accounting Modern accounting system is combined new technique to improve the efficiency and effectiveness of the accounting process that consists of four dimension.

Faster Accounting Processing

Faster accounting processing refers to ability to collect and assess large amounts of financial and nonfinancial information and report the financial statement report quickly through the accounting system (Ghasemi et al., 2011). Traditionally, company required financial or non-financial reporting based on quarterly and annual periods. Monthly or year-end closing period and taxing have long hours to do because there are a lot of information to assess. Hence, the longer hours lead higher labor cost (Ghasemi et al., 2011). Implement the information technology in accounting lessened the amount of time needs to close out each accounting period. The information change from paper based to electronic base and collected in the company's database (Braun and Davis, 2003; Warren and Smith 2006). Anyone can input the information to the database by using desktop, laptop or mobile device and the information which related will updated in milliseconds, its helps accounting department receive the information rapidly (Guney, 2014; Trigo et al., 2014). As a result, the financial statement can be generated more quickly than the traditional accounting system.

Using accounting program help accountant identify, measure, record the transaction. It improves the efficiency of the accounting process by reducing time to assess and update the information. Thus, accounting department can prepare and present monthly financial statement, year-end financial statement specially taxing faster than the past. The short time aids company in cost control and increases overall company efficiency (Ghasemi et al., 2011). Thus, it leads to the following hypothesis:

Hypothesis 1a: *A firm with accounting system like faster accounting process will achieve higher organization management efficiency.*

Increasing Functionality

Increasing Functionality is defined as collect relevance financial information and nonfinancial information for decision making from all segments in organization in order to prepare reports and operations analysis for giving an accurate picture of current operation to the manager (Ghasemi et al., 2011). Nowadays, the information technologies are large computing power and gigantic data storage capacity. Consequently, it allows the production of reports combining different views of the organization, contributing to its competitiveness increases (Trigo, 2014). Implement information technologies in accounting have improved functionality of accounting department by access information from all function in organization. It links business processes such as accounting, human resources, and planning factions in the front-office to warehouses, manufacturing facilities, and the transportation function in the back office together and the integration of people, suppliers, and customers which is very necessary in a business operation (Sumritsakun, 2012). It leads more managerial accounting information which are generated like segment reports (profit and loss of the segment) and market share reports.

Because, the managers in difference positions (the marketing manager, production and etc.) have different responsibility and problem to solving, the appropriate information can help managers enhancing the quality of decisions they make, consequently improving their company performance (Mia and Patiar, 2001). Finally, modern accounting system has to reporting the complete information about key dimensions of the company allowing the manager decide the better direction and action to take in each moment. Thus, it leads to the following hypothesis:

Hypothesis 1b: *A firm with accounting system which is increasing functionality will achieve higher organization management efficiency.*

Better External Reporting

Better external reporting is defined as ability to prepare and report financial and nonfinancial information that meet the needs of diverse users (Ghasemi et al., 2011). The financial statement is to provide the relevant information to internal user (manager) and external users (potential investors, creditors, suppliers and customers) which supports subsequent financial decisions. The modern accounting system has been improved to implement information technologies. It allows the investor to determine if a company is a good investment for growth opportunities and has the potential to be a high-value company. In addition, the implementation helps internal auditor to improve the ability of analytical procedure and to increase the rationality of comments on the classification of errors in recording or assembling data, irregularities, illegal activities, unusual events or transactions and inefficient operations. As a result, it helps internal auditors enhance the confidence of the assurance and consulting work (Sumritsakun, 2013; Sumritsakun and Ussahawanitchakit, 2009)

Professional investors believe that accuracy and real-time financial statement reporting allows them not only to better understand corporate performance but also be more confident on corporate governance (Trigo, 2014). Consequently, it increases the chance of the company to attract more investment form investors. It leads to the following hypothesis:

Hypothesis 1c: *A firm with accounting system which better external reporting will achieve higher organization management efficiency.*

Real-Time Reporting

Real-time reporting refers to the ability to review and proof information immediately and there are current information, using technologies such as internet, intranet, extranet and cloud computing to help company implement real-time reporting. Nowadays, desktop, laptop and mobile device can record the transaction to company's database. The new information that recorded will refresh all related information simultaneously through a single operation. As a result, the manager of the company can access up-to-date and true information (Guney, 2014). Implementation of technologies in accounting brings real-time reporting. When the new transaction occurs and it is input to the accounting program, the program will identify, measure, record the information and update the related files in the database within milliseconds and communicate economic information to managers and other users immediately to permit informed judgments and economic decision (Trigo et al., 2014).

Real-time reporting allows manager and other users receive the relevant information produced anytime and anywhere. It helps manager enabling not only the long term planning of the company goals but also the management and optimization of daily operation (Trigo et al., 2014). Finally, the updated information allow manager rapidly adapt to opportunities and answer problems and achieve organization goal. Thus, it leads to the following hypothesis:

Hypothesis 1d: *A firm with accounting system which is on-time checking will achieve higher organization management efficiency.*

4. RESEARCH METHODS

4.1 Sample Selection and Data Collection Procedure

In this study, the population and sample are all SMEs in Thailand and key informant is the accounting managers of each of the SMEs. The database is drawn from the Office of SMEs Promotion on its website: http://www.sme.go.th. Based on this database, there were 684,730 firms as end of 2013 (The Office of SMEs Promotion 2013). Using Yamane table to determine sample size for ±5% precision levels where confidence level is 95% and p =.5. Thus, the samples are the remaining 400 firms.

The questionnaire was constructed covering contents according to each variable that was operationalized for empirical studies. The questionnaires are sent to accounting managers to provide data for this study via mail. After two months, 118 questionnaires were returned. The response rate of this paper was 29.50%. According to Aaker, Kumar and Day (2001), the response rate for a mail survey, without an appropriate follow-up procedure, is less than 20%. In addition, non-response bias was investigated by t-test, responses from the first wave and second wave data as recommended by Armstrong and Overton (1977). Neither procedure showed significant differences. Therefore, it was implied that these returned questionnaires show as non-response bias. Thus, the response rate of this study is considered acceptable.

4.2 Methods

Factor analysis is employed to assess the underlying associations of a large number of items and to determine whether they can be reduced to a smaller set of factors. The factor analysis conducted is done independently on each set of the items representing a particular scale due to limited observations. This analysis has a high potential to inflate the component loadings. Accordingly, a higher rule-of-thumb, a cut-off value of 0.40, is adopted (Nunnally and Bernstein, 1994). All factor loadings are greater than the 0.40 cut-off and are statistically significant. Moreover, the reliability of the measurements was evaluated by Cronbach alpha coefficients. In the scale reliability, Cronbach alpha coefficients are greater than 0.70 (Nunnally and Bernstein, 1994). The scales of all measures appear to produce internally consistent results; thus, these measures are deemed appropriate for further analysis because they express an accepted validity and reliability in this study. Table 1 presents the results for both factor loadings and Cronbach alpha for multiple-item scales used in this study.

TABLE 1
RESULTS OF MEASURE VALIDATION

Items	Factor Loadings	Cronbach Alpha
Organization Management Efficiency (OME)	0.741 – 0.893	0.864
Fast Accounting Process (FAP)	0.758 - 0.946	0.817
Increasing Functionality (INF)	0.833 - 0.907	0.901
Better External Reporting (BER)	0.757 – 0.890	0.845
Real Time Reporting (RTR)	0.796 – 0.891	0.815

The ordinary least squares (OLS) regression analysis is used to test and examine the hypothesized relationships and estimate factors of modern accounting system of SMEs in Thailand. Here, IT budget supporting, IT practice and training, IT system development, fast accounting process increasing functionality, better external reporting on-time checking and organization management efficiency play significant roles in explaining the research relationships. Because all dependent variables and independent variables in this study are scaled to ratio data by using factor score. Thus, OLS is an appropriate method for examining the hypothesized relationships. With the need to understand the relationships in this study, the research model of the aforementioned relationships is as follows.

Equation 1: $OME = \beta_{01} + \beta_1 FAP + \beta_2 INF + \beta_3 BER + \beta_4 RTR + \varepsilon$

5. RESULTS AND DISCUSSION

TABLE 2
DESCRIPTIVE STATISTICS AND CORRELATION MATRIX

Variables	OME	FAP	IFL	BFR	RTR	VIF
Mean	4.25	3.96	4.23	4.15	4.27	
S.D.	0.52	0.57	0.64	0.5	0.49	
OME	1					
FAP	.588**	1				1.786
IFL	.720**	.268**	1			3.480
BFR	.830**	.561**	.795**	1		4.882
RTR	.663**	.177	.732**	.696**	1	2.489

** p<.01

Table 2 shows the descriptive statistics and correlation matrix for all variables. With respect to potential problems relating to multicollinearity, variance inflation factors (VIF) are used to provide information on the extent to which non-orthogonality among independent variables inflates standard errors. The VIFs range from 1.786 to 4.882, is well below the cut-off value of 10 recommended by Neter, Wasserman and Kutner (1985), meaning that the independent variables are not correlated with each other. Therefore, there are no substantial multicollinearity problems encountered in this study.

TABLE 3
RESULTS OF REGRESSION ANALYSIS

Independent Variables	Dependent Variables
	OME
Constant	-.000
FAP	.299**
INF	.202*
BER	.349**
RTR	.219**
Adjust R2	.748

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

Table 3 presents the results of OLS regression analysis including the influence of modern accounting system dimension consisted of fast accounting process, increasing functionality, better external reporting and on-time checking on organization management efficiency. The results show that, fast accounting process has a significant positively effect on organization management efficiency (b_1 = 0.299, p<.01). The use of accounting program improve the efficiency of the accounting process by help accountant identify, measure, record the transaction. As a result, it reduces time to prepare and present monthly financial statement, year-end financial statement specially taxing faster than the past (Ghasemi et al., 2011). ***Thus, Hypotheses 1 is supported***.

In addition, increasing functionality has a significant positively influence on organization management efficiency (b_2 = 0.202, p<.01). Because, modern accounting system has to reporting the complete information about key dimensions of the company allowing the manager which in different position enhancing the quality of decisions they make, consequently improving their company performance (Mia and Patiar, 2001). ***Thus, Hypotheses 2 is supported***.

Moreover, better external reporting has a significantly positive effect on organization management efficiency (b_3 = 0.349, p<.01). The modern accounting system helps internal auditor enhance the confidence of the assurance and consulting work by improving the ability of analytical procedure and increasing the rationality of comments on the classification of errors in recording or assembling data, irregularities, illegal activities, unusual events or transactions and inefficient operations (Sumritsakun, 2013; Sumritsakun and Ussahawanitchakit, 2009) ***Thus, Hypotheses 3 is supported***.

Furthermore, real time reporting has a significantly positive influence on organization management efficiency (b_4 = 0.219, p<.05). The modern accounting system with real-time reporting allows manager and other users receive the relevant information produced anytime and anywhere and the updated information allow manager rapidly adapt to opportunities and answer problems and achieve organization goal. ***Thus, Hypotheses 4 is supported***.

6. CONTRIBUTIONS AND FUTURE DIRECTIONS FOR RESEARCH

6.1 Theoretical Contributions and Future Directions for Research

The study provides important theoretical contributions expanding on previous knowledge and literature of modern accounting system. For preceding the field theoretically, this research is one of the first known studies to suggest four dimensions of modern accounting system namely fast accounting process, increasing functionality, better external reporting and real time reporting. Moreover, the conceptual model of this study is evolved from the application of a research based view of the firm, in the view of modern accounting system as a firm specific resource. Furthermore, this is a new contribution for academic research to extend the understanding of the subject of modern accounting system in Thai SMEs.

6.2 Managerial Contribution

This study helps Thai SMEs managers understand the influence of modern accounting system on organization management effectiveness. Moreover, it uncovers the dimension of modern accounting system namely, fast accounting process, increasing functionality, better external reporting and real time reporting that helping managers to Understand the characteristics of modern accounting system. Furthermore, this study provides evidence that SMEs which use modern accounting system will increase organization management effectiveness of the firm.

7. CONCLUSION

This study needs to provide clear understanding of how modern accounting system can improve the organization management effectiveness of Thai SMEs. Thus, the objective of this study is to investigate the effect of modern accounting system on organization management effectiveness. Modern accounting system includes four dimensions, namely fast accounting process, increasing functionality, better external reporting and real time reporting. The samples of this study are Thai SMEs and accounting managers of Thai SMEs are key information. The results revealed that fast accounting process, increasing functionality, better external reporting and real time reporting have positive influence on the organization management effectiveness.

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