Accounting information transparency and decision making effectiveness: evidence from financial businesses in Thailand

Satiya Klinsukhon
PhaprukeUssahawanitchakit
Mahasarakham University, Thailand

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Abstract

The purpose of this study is to examine the effect of accounting information transparency on decision making effectiveness via mediating influences, which include financial report quality and information advantage. The author improves novel components of accounting information transparency: disclosure, accuracy, and clarity. Data was collected from 238 Thai firms, divided into two categories: financial institutions and insurance companies. The statistics used to analysis multiple regression analysis. The result indicates that accounting information transparency has significantly positive influence on financial report quality and two of three dimensions of accounting information transparency have significantly positive influence on information advantage. Moreover, financial report quality and information advantage have significantly positive influence on decision making effectiveness.

1. Introduction

Recent crisis involves the actions taken by Toshiba Corporation in the wake of an accounting scandal. Between 2006 – 2014 Toshiba overstated operating profits by more than $1.2 billion (The Japan Times News,2015). Unethical behavior intended to break the rules and regulations to manipulate information was presented in the financial statements. The financial statements did not present accurate and useful information. Such accounting scandals weredue to the lack of financial transparency, imperfect regulations and unethical behavior (Hanson, 2003, Holzner et al., 2002). Furthermore, in the aftermath of Enron, WorldCom and other corporate scandals, the call went forth from various stakeholders for more "transparency" in accounting, auditing and corporate governance (Arya, et al., 2003). In the meantime, academic accountants began the task of identifying the attributes and mechanisms of corporate transparency (Anctil et al., 2004, Bushman et al., 2004). In the end, the US was to rule out Sarbanes-Oxley Acts to create transparency in financial reporting and business operations in a more ethical manner.Sarbanes-Oxley Act section 404 provides established internal controls and procedures for financial reporting and documents.It also tests and maintains internal controls and procedures to ensure their effectiveness. (SOX, 2002). Together, section 409 and Securities and Exchange Commission (SEC) require annual financial report disclosures for information transparency because information transparency plays an important role for its users, as most user require financial statements to support their decision making in the future (Reck, 2004). Nevertheless, not only more information transparency is needed, but also reliable information. Therefore, information transparency is an important issue for all companies because it helps to build stakeholder's confidence on their investment decisions. (Yu, 2005, Elliott et al., 2009).

The Corruption Perceptions Index 2014, ranked by Transparency International, shows the result of Thailand perceived transparency score at 38/100 and ranked at 85th from 175 countries, 12thof 28 countries in Asia Pacific (Report the Corruption Perceptions Index, 2014). The result suggests that Thailand have corruption problems as well as the lack of transparency. Furthermore, the findings in 2015 from a corporate governance assessment of 588 listed companies also shows that there is disclosure and transparency category having the score of 80 percent (Corporate Governance Report of Thai Listed Company, 2015). Thus, transparency in the preparation of financial statements helps build users' confidence and promote effective decision making. In Thailand, the concept of transparency is not a new concept although it is not widely practiced in every businesses. In financial businesses, it is believed that transparency can help attract more professionals and investors in the property market. Transparency has therefore become more significant in the financial businesses due to the demand from investors (Schulte et al., 2005).

The financial business have revealed sensitive information, accurate to stakeholders and financial decisions. Disclosure of information as an indicator of transparency in the operation, is a key factor in building confidence among all stakeholders of the financial business's operational integrity and a mechanism to monitor

the implementation. (Guide governance of Government Savings Bank, 2015). This little study focuses on the transparency of financial businesses in Thailand. The literature, however, has been hampered by methodological issues over what actually constitutes "transparency", as well as the lack of a quantitative indicator which has substantial coverage across countries and time (Williams, 2014).Within accounting information, this ideal of transparency leads to an influential belief that by making financial information and processes more visible to users, related information and processes would be made more available and accessible to users, providing them with greater control and enabling enhanced decision making. (Roberts ,2009).

The aim of this study is to investigate the relationships between accounting information transparency, including three dimensions (disclosure, accuracy, and clarity) and decision making effectiveness through impact on financial report quality and information advantage.

In this study the key research questions are: (1) How does each dimension of accounting information transparency influence on financial report quality,information advantage and decision making effectiveness? (2) How does financial report quality influence on decision making effectiveness? (3) How does financial report quality and information advantage influence on decision making effectiveness?

The study is structured as follows: Firstly, the researcher provides the relevant literatures and hypotheses development. Secondly, the researcher explains the methodology, including data collection procedure and measurement, measure validation, and statistical technique. Next, the researcher discusses the results of this study, then explains the contributions. Finally, the summary is provided along with the limitation of this study.

2. Literature Review and Hypothesis Development

This study investigates the relationship between accounting information transparency and decision making effectiveness through the impact on mediators as financial report quality and information advantage. All hypotheses in this research proposed to have a positive effect. The conceptual model presents the relationship between all constructs in Figure 1.

This study explains and predicts the relationship between variables under the concept of agency theory.

One possible reason for agency problems is a result of the information asymmetry (Sengupta, 1998). The basic insight of the agency theory is that one party (principal) hires another (agent) to take charge of a specific task, but the former suffers from an information asymmetry, which introduces a problem in terms of motivating the agent. The agency problem shows that it is hard for internal agent to deliver credible information to external information users. Thus, according to Zuo, G. (2012), transparency consists of greater disclosure, high quality disclosure and understandable information. Transparency helps to reduce such agency problem as information asymmetry.

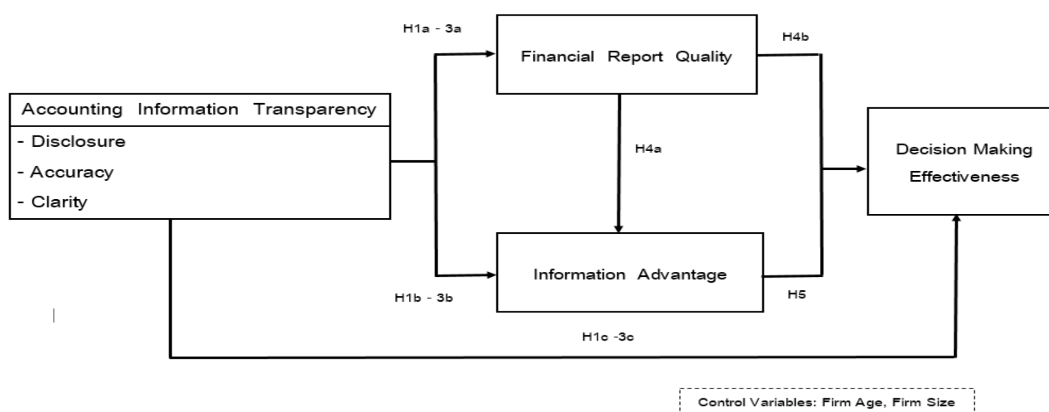

Figure 1 : Conceptual Model of Accounting Information Transparency and Decision Making Effectiveness

2.1 Accounting Information Transparency

Accounting information plays an important role for its users, especially in decision-making. Information of accounting in financial statements represents the financial effects of past events and transactions, which can

be used to support decision making in the future. In addition, the non-financial information also supports decision-making for users of financial statements. According to Barth and Schipper (2008), financial reporting transparency is identified as, on the one hand, disclosure for information in the financial statements are underlying economics; on the other hand, information disclosure in the financial statements are readily understandable by internal and external information users. Florini (2007) defines transparency as the degree of information ~~is~~ available to outsiders, allowing them to make decision and/or to assess the decision of insiders. Furthermore, transparency is related to quality of information such that information needed should be easily understood, factually accurate by the intended audience and presented in a feature that promotes adoption of the desired behaviors (O'Malley and Thompson, 2009). Further definition of financial transparency is comprehensibility, clarity, and clearness, and excellent corporate governance (Hanson, 2003, Holzner et al., 2002). Accurate, clear, and disclosed information can be considered to hold a strong degree of transparency. (Schnzackenberg, 2009). In this study, accounting information transparency is defined as reliable accounting information which helps users to accurately make decisions. The characteristics of the information quality include: 1) the level of disclosed information presented, which will be available to interested parties. This disclosure must be timely appropriate, relevant and easy to understand. 2) the level of accuracy which complies with standard accounting rules. 3) clarity, focusing on the benefits of the information, which is accurate, complete, adequate, reliable and relevant to decision making. Therefore, if the company has accounting information transparency, it will enable the company to have financial report quality, information advantage to be used in effective decision making. In this study, the construct of accounting information transparency has three dimensions, consisting of disclosure, accuracy and clarity (Schnackenberg, 2009). The details of each dimension are described below.

Disclosure

Disclosures are generally defined as announcements which employ a disseminate policy, accounting technique and make somewhat verifiable forecasts (Diamond &Verrecchia, 1991). In Nada Lahrech, AbdelmounaimLahrech and Youssef Boulaksil (2014), a significant relationship between the disclosure level of quantitative and qualitative information in Islamic banking financials and the profit allocation ratio is studied. Disclosure is meant to include both the *availability* of that representation to interested parties as well as the *quantity* of information presentation. Core (2001) identifies disclosure quality as an agent to disclosure policy optimization in a firm. Such studies conclude that *quality* is a separate and identifiable element to disclosure. In this study, disclosure is defined as *timeliness,* referring to the timely presentation of financial information; *relevance* refers to the extent to which these reports provide users with the information required to make effective decisions; and *openness* refers to the understandability and accountability (Cottarelli, 2012). Therefore, firms that produce their accounting information disclosure following the timeliness, relevance and openness tend to increase the quality of financial report and reliability of the information, as well as enhance quality of decision making. Therefore, the hypotheses are posited as follows:

Hypotheses 1: The higher the disclosure is, the more likely that firms will gain greater (a) financial report quality, (b) information advantage, and (c) decision making effectiveness.

Accuracy

Accounting standards are the basic concepts focusing on the preparation and presentation of financial statements for external users (IASB, 2009).The regulations are corporate governance that reforms the firm's transparency, and the firms that follow the related regulations will increase the information's transparency (Waroonkun and Ussahawanitchakit, 2011). In this study, accuracy is defined as the accounting information that strictly follows the accounting standards, regulation and the follow up changes in those standards including constant focus on the understanding and interpretation of the accounting standards to help the organization present financial reports correctly and completely (Kohlbeck and Warfield, 2010). Therefore, firms which prepare accounting information following the standards tend to increase the quality of financial report and reliability of the information, as well as enhance quality of decision making. Therefore, the hypotheses are posited as follows:

Hypotheses 2: The higher the accuracy is, the more likely that firms will gain greater (a) financial report quality, (b) information advantage, and (c) decision making effectiveness.

Clarity

Clarity are defined as the focus on the utility of accounting information which is accurate, adequate, reliable,complete, and relevant for decision making to establish the reliability of accounting information for stakeholders. This will eventually lead to the added value of the firm. Financial information usefulness is very important for both internal and external users to support decision making related to the operations (Reck, Vernon and Gotlob, 2004).

Hypotheses 3: The higher the clarity is, the more likely that firms will gain greater (a) financial report quality, (b) information advantage, and (c) decision making effectiveness.

2.2 Financial Report Quality

Financial report quality are the accuracy, timeliness, completeness, consistency, and relevance of the used information system applied to the problem solving. Furthermore, it also covers used information, business performance, which includes role in the procedures and the operation of the business, both non-monetary and monetary (Neely and Cook, 2011). Therefore, the information will affect the operation of the business (Delone and Mclean, 2003; Chitmun, Ussahawanitchakit, 2012), resulted in the decision to take benefit from an information system in operation. In addition, financial reporting quality will affect information reliability, effectiveness of decision making, and useful information. In this study,financial report quality refers to the information comprehensiveness and support for the success of businesses, the information to assess and reflect the accuracy of situation which can be used to support better decision making than the competitors. Therefore, the hypotheses are posited as follows:

Hypotheses 4: The higher the financial report quality is, the more likely that firms will gain greater (a) information advantage, and (b) decision making effectiveness.

2.3 Information Advantage

Information advantage is defined as both the financial information and non-financial information which can reflect the actual operational condition effectively, and can be a good indicator of the profitability of the business both at present and in the future. Information advantage helps an organization's process to increase efficiency and effectiveness (Glomstead, 2001) and decision making. Information advantage is the greater qualitative characteristic of accounting information which can enhance the organization's capacity to analyze, assess, and forecast the economic events with accuracy and clarity (PWC, 2010). Financial information usefulness refers to good results of the reports that reflect the position of financial and operating results, which are accurate and reliable, and can be used to support decision making or forecasting of future performance (Fisher and Kingma, 2001).The purpose of financial information is to provide relevant and timely information for users to support decision making (Pongsatitpat and Ussahawanitchakit, 2012). Decision making is concerned with actions in the future (Bello, 2009) or financial information that is the foundation of internal financial information to assist managers to make business decisions. Krumwiede et al. (2007) and Zager and Zager (2006) state that information advantage is financial information usefulness in the context of the decision making process.

2.4 Decision Making Effectiveness

Decision making effectiveness is defined as the ability to use data to make effective, timely, and appropriate decisions to achieve the desired purpose. Accounting systems have been considered important organizational mechanisms which are critical for effective decision management and control in a business (O'Donnell and David, 2000). Successful decision making is the achievement in the selection among company choices which enables organizations to reach their objectives or goals. Ability of manager to manage relies on good decision making, which is a selection of the most efficient course of action to achieve desired objective. In selecting the most appropriate choice, a manager needs information related to alternative solutions such as cost information quality (Barfield et al., 1997). Moreover, prior research suggested that effective decision making is an assessment to the extent that the decision maker achieves the desired purpose related to business performance (Barfied et al., 1997; Ponikvar et al., 2009; Dimitratos et al., 2011). Thus, in this study, decision making effectiveness refers to companies which make accurate and timely decisions helping the organization to reach the desired goals. In this study, firms which have information advantage tend to make better decisions.Thus, the hypotheses are proposed as follows:

Hypotheses 5: The higher the information advantage is, the more likely that firms will gain greater decision making effectiveness.

3. Research Methods

3.1 Sample Selection and Data Collection Procedure

The sample of this study is financial businesses in Thailand consist of 238 firms divided into two categories: financial institutions and insurance companies. Database in this research is drawn from the Bank of Thailand and Insurance Thailand on their websites: www.bot.or.th and www.thai.insurancethailand.info. Accounting executives and accounting managers of each business are chosen as key participants. The data were collected via questionnaires, in which 228 out of 238 were returned. The mailing was 238 surveys, the returned questionnaires 10 mailing. Thus successful questionnaires mailed 228. Among the completed and returned surveys, only 78 were usable. The effective response rate was thus 34.21%. The response rate for a mailed survey with an appropriate follow-up procedure, if greater than 20%, is considered acceptable (Aaker, Kumar and Day, 2001).

3.2 Test of Non-Response Bias

Empirical research has been checked for non-response bias and to detect and consider possible problems with non-response errors, the investigation and assessment of non-response-bias are tested with the early and late wave data as recommended by Armstrong and Overton (1977). The mean of demographic variables of the two waves is tested by t-test whether the means are different between respondents. The result showed no significant differences. Thus, a non-response bias is not considered a problem in this study.

3.3 Variable Measurements

All variables were obtained from the survey and all items of the questions are measured by a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Constructs in the conceptual model are developed and modified from prior research. Thus, in this study, the variable measurements of the dependent variable, independent variables, mediating variable and control variables are described below.

Dependent Variable

Decision making effectiveness is defined as companies which make accurate and timely decisions helping the organization to reach the desired goals. In this study, firms which have information advantage tend to make better decision.

Independent Variables

This research consists of seven independent variables: accounting information transparency, and two outcomes. Accounting information transparency as the first one is the core construct of this study. This variable is measured by three attributes: disclosure, accuracy, and clarity. Moreover, these attributes reflect the accounting information that is in compliance with accounting standards and regulations to obtain information that is reliable and useful for decision-making, as well as to prepare information for reporting to management and stakeholders effectively. The measure of each attribute is detailed as follows:

Disclosure is defined as *timeliness,* referring to the timely presentation of financial information; *relevance* refers to the extent to which these reports provide users with the information required to make effective decisions; and *openness* refers to the understandability and accountability

Accuracy is defined as the accounting information that strictly follows the accounting standards, regulation and the follow up changes in those standards including constant focus on the understanding and interpretation of the accounting standards to help the organization present financial reports correctly and completely.

Clarity is defined as the focus on the utility of accounting information which is accurate, adequate, reliable,complete, and relevant for decision making to establish the reliability of accounting information for stakeholders.

Financial report quality is defined as the information comprehensiveness and support for the success of businesses, the information to assess and reflect the accuracy of situation which can be used to support better decision making than the competitors.

Information advantage is defined as good results of the reports that reflect the position of financial and operating results, which are accurate and reliable, and can be used to support decision making or forecasting of future performance.

Control Variables

In this study, the control variables consist of firm age and firm size.

Firm age is defined as the number of years a firm or the period of time has been in operation (Jonas and Diamanto, 2006) and there is a significant relationship between firm growth and firm age (Capelleras and

Rabetino, 2008). In this study, firm age is measured by the number of years a firm has been in operation using a dummy variable of 1, which means the firm has been in business for more than 15 years; and 0 which means otherwise.

Firm size determines the success of the organization and the value of organizational performance (Serrano-Cinca et al., 2005). In this study, firm size is measured by the total assets of the firm using a dummy variable of 1, which means the firm has total assets of more than 10,000,000,000 baht, while 0 means otherwise.

3.4 Reliability and Validity

Reliability of collected data was tested by Cronbach's alpha coefficients to measure internal reliability of respondents' answer for all items in the questionnaires which are greater than 0.70 (Nunnally and Bernstein, 1994). Cronbach's alpha coefficientsof constructs have values ranging 0.826 – 0.907. For testing the validity, this study produces an exploratory factor analysis (EFA) to test the construct validity of the instrument by examining the underlying relationships of a large number of items, and to determine whether they can be reduced to a smaller set of factors. This analysis has a high potential to inflate the component loading. Therefore, as a higher rule-of-thumb, a cut-off value of 0.40 is accepted (Hair et al., 2010). Factor loading have value ranging 0.715 – 0.939, all factor loadings greater than the 0.40 cut-off are statistically significant. Table 1 presents the results for both factor loadings and Cronbach's alpha for multiple-item scales in this study.

Table 1 : Results of Measure Validation

Items	Factor Loadings	Cronbach Alpha
Disclosure (DC)	.715 - .896	.826
Accuracy (AC)	.866 - .897	.907
Clarity (CL)	.765 - .939	.859
Financial Report Quality (FRQ)	.841 - .890	.872
Information Advantage (IA)	.766 - .933	.887
Decision Making Effectiveness (DME)	.868 - .938	.899

Table 1 shows that all variables have a factor loading score between 0.718 - 0.944 indicating that there is construct validity. Furthermore, Cronbach's alpha coefficients for all variables are presented between 0.831 - 0.921. Consequently, the reliability of all variables is adopted.

3,5 Statistical Techniques

Multiple regression analysis is an appropriate method for examining the hypothesized relationships.

In this study, the model of the relationships is depicted as follows:

Equation 1: $FRQ = \beta_{01} + \beta_1 DC + \beta_2 AC + \beta_3 CL + \beta_4 FA + \beta_5 FS + \varepsilon_1$

Equation 2: $IA = \beta_{02} + \beta_6 DC + \beta_7 AC + \beta_8 CL + \beta_9 FA + \beta_{10} FS + \varepsilon_2$

Equation 3: $IA = \beta_{03} + \beta_{11} FRQ + \beta_{12} FA + \beta_{13} FS + \varepsilon_3$

Equation 4: $DME = \beta_{04} + \beta_{14} FRQ + \beta_{15} IA + \beta_{16} FA + \beta_{17} FS + \varepsilon_4$

Equation 5: $DME = \beta_{05} + \beta_{18} DC + \beta_{19} AC + \beta_{20} CL + \beta_{21} FA + \beta_{22} FS + \varepsilon_5$

4. Results and Discussion

The descriptive statistics and correlation matrix for all variables are shown in Table 2. It can be seen that the potential problems relating to multicollinearity, variance inflation factors (VIFs) were used to provide information on the extent to which non-orthogonality among independent variables inflates standard errors. The VIFs range from 1.036 to 4.138, well below the cut-off value of 10 as 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 2 : Descriptive Statistics and Correlation Matrix

Variable	DC	AC	CL	FRQ	IA	DME
Mean	4.468	4.224	4.423	4.396	3.990	4.158
S.D.	0.474	0.583	0.588	0.553	0.684	0.578
DC	1					
AC	0.541**	1				
CL	0.873**	0.622**	1			
FRQ	0.855**	0.731**	0.922**	1		
IA	0.469**	0.729**	0.412**	0.578**	1	

DME	0.483**	0.766**	0.508**	0.613**	0.830**	1

<.05,*p<.01

Table 3 : Results of Regression Analysis

Independent	Dependent Variables				
	Eq.1	Eq.2	Eq.3	Eq.4	Eq.5
Variables	FRQ	IA	IA	DME	DME
DC	0.252***	0.288**			0.123
	(0.061)	(0.134)			(0.139)
AC	0.255***	0.757***			0.730***
	(0.042)	(0.092)			(0.096)
CL	0.552***	- 0.285			-0.044
	(0.066)	(0.145)			(0.151)
FRQ			0.577***	0.182**	
			(0.091)	(0.076)	
IA				0.759***	
				(0.078)	
FA	-0.112	-0.224	-0.159	0.124	-0.078
	(0.066)	(0.145)	(0.182)	(0.125)	(0.151)
FS	0.051	-0.068	-0.165	0.038	-0.010
	(0.069)	(0.153)	(0.190)	(0.130)	(0.159)
Adjusted R^2	0.919	0.605	0.369	0.717	0.573
Maximum VIF	4.087	4.087	1.029	1.649	4.087

*p<0.1, **p<0.05, ***p<0.01[a] Beta coefficients with standard errors in parenthesis.

Table 3 presents results for multiple regression of hypotheses 1a-3a, hypotheses 1b-3b, and hypotheses 1c-3c. The results of relationships among the three dimensions of accounting information transparency (including disclosure, accuracy and clarity), financial report quality, information advantage, and decision making effectiveness are shown in Eq.1, 2, and 5. Eq.1 also presents the relationships between accounting information transparency and financial report quality are provided in Table 3. The results show significant positive effects of disclosure (β_1 = 0.252, p<0.01), accuracy (β_2 = 0.255, p<0.01), and clarity (β_3 = 0.552, p<0.01) on financial report quality. These results indicate that the businesses with higher accounting information transparency consist of disclosure, accuracy and clarity will have greater financial report quality consistent with the study of Roberts (2009), IASB (2009) and Kohlbeck and Warfield (2010). Hence, **Hypotheses 1a, 2a, and 3a are supported.** However, Eq.2 presents the relationships between accounting information transparency and information advantage. The results show significant positive effects of disclosure (β_6 = 0.288, p<0.05) and accuracy (β_7 = 0.757, p<0.01) on information advantage. These results show that the businesses with higher accounting information transparency consist of disclosure and accuracy will have greater information advantage (Roberts, 2009). Thus, **Hypotheses 1b and 2b are supported and 3b is not supported**. Moreover, Eq.5 indicate that accuracy of accounting information transparency has a significant positive influence on decision making effectiveness (β_{19} = .730, p<.01). Thus, **Hypothesis 2c is supported and 1c and 3c are not supported** consistent with the study of Diamond and Verrecchia (1991), Price et al.(2011) and Reck, Vernon and Gotlob, (2004) who found that accounting information transparency has an impact on decision making.

Moreover, the finding in Eq.3 indicates that financial report quality is positively correlated with information advantage (β_{11} = 0.577, p<0.01). Thus, **Hypotheses 4a is supported**. These results suggest that the businesses with higher financial report quality will have higher information advantage consistent with the study of Delone and Mclean (2003). Finally, the findings in Eq.4 shows that financial report quality and information advantage are positively correlated with decision making effectiveness (β_{14} = 0.182, p<0.05; β_{15} = 0.759, p<0.01). Thus, **Hypotheses 4b and 5 are supported.** These results suggest that the businesses with higher financial report quality and information advantage will have higher decision making effectiveness (Fisher and Kingma, 2001;Bruce et al, 2002;Reck, Vernon and Gotlob, 2004; Zager and Zager 2006; and Krumwiede et al., 2007).

5. Contributions

5.1 Theoretical Contribution

This study provides a clearer understanding of the relationships among three dimensions of accounting information transparency and decision making effectiveness of financial businesses in Thailand via financial report quality and information advantage. The study is intended to expand on the theoretical contributions of previous knowledge and literature of accounting information transparency. Another contribution is the form of

the identification of three dimensions of accounting information transparency for empirical study, which provides an important theoretical contribution expanding on all or some dimensions that are positively related to financial report quality, information advantage, and decision making effectiveness.

5.2 Managerial Contribution

This study helps accounting executives identify and justify key components of the three dimensions of accounting information transparency, which may be critical in severe market competition. In addition, this also assist them to understand the importance of accounting information transparency (disclosure, accuracy, and clarity) which may contribute to accurate, timely, and beneficial decision making of the organizations.

6. Conclusion

The purpose of this study is to examine the relationships between accounting information transparency including three dimensions (disclosure, accuracy, and clarity) and decision making effectiveness through impact on financial report quality and information advantage. The finding indicates that all dimensions of accounting information transparency have significantly positive influence on financial report quality and two of three dimensions of accounting information transparency have significantly positive influence on information advantage. However, only accuracy of accounting information transparency has significantly positive influence on decision making effectiveness. In addition, financial report quality has significantly positive influence on information advantage. Moreover, financial report quality and information advantage have significantly positive influence on decision making effectiveness.

This study has some limitation in that it focuses on only financial businesses in Thailand and the sample used is too small.

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