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Corporate Governance Mechanisms and Intellectual Capital Disclosure in Market for Alternative Investment of Thailand

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Abstract

This research aims to study 1) the relationship between corporate governance mechanisms and financial disclosure of intellectual capital, 2) the relationship between corporate governance mechanisms and non–financial disclosure of intellectual capital. The sample consisted of 312 firm–year observations from 2015 to 2019. They were selected by companies listed on the Market for Alternative Investment of Thailand and the data were collected from financial statements, annual reports, notes to financial statements, the SET Market Analysis and Reporting Tool, and the website of the Securities and Exchange Commission of Thailand. This study measured corporate governance mechanisms consisting of independent directors, audit committee, and top five shareholders. Intellectual capital measured financial and non–financial disclosure. The data were analyzed using statistical regression methods with panel data analysis. The finding reveals that independent directors and audit committees have a significant positive association with the financial disclosure of intellectual capital, while the top five shareholders have a significant negative association with the non–financial disclosure of intellectual capital. The results confirmed the agency theory that corporate governance mechanisms can increase the monitoring of managers' behavior and mitigate conflicts of interest between owners and managers. Furthermore, the study highlighted the significant role of corporate governance mechanisms in managing and utilizing intellectual capital for stakeholders of companies listed on the alternative capital market in Thailand.

Keywords: Corporate Governance Mechanisms; Intellectual Capital Disclosure; The Market for Alternative Investment in Thailand

Introduction

Nowadays, the economy is rapidly changing, and as a result, corporations seek opportunities for growth. Corporations cannot create growth based on the value of their physical assets. Instead, a firm's growth is driven by creating value in its intangible assets such as research and development, intellectual property, licensing, employee training, market knowledge, information systems and etc., known as intellectual capital (Yallwe & Buscemi, 2014). Intellectual capital (IC) is created from the employee's knowledge which is embedded in the organizational process. After that, organizational knowledge becomes part of the collaboration among business partnerships. Thus, IC is also a crucial asset to enhance opportunity competitiveness and support internal control (Dalwai & Mohammadi, 2020). The Securities and Exchange Commission of Thailand required that every company should disclose its crucial information related to the company drawing transparency, equality, and reliability to obtain quality information for stakeholders (The Securities and Exchange Commission of Thailand (SEC), 2017). Information on IC is key information about management and control firm's resources that are needed to be disclosed (Buallay & Hamdan, 2019). IC disclosure can increase assurance for stakeholders; they can gain benefits from resource capability for firm growth.

The accounting standard indicates that IC information has not been mandated disclosure, but a voluntary disclosure (Suttipun, 2018). It depends on the manager whether to disclose it in the company's annual reports or financial statements (Alfraih, 2018). Therefore, IC information is interesting because it can be concealed by managers about investing and managing, and it can be a tool for managers to seek benefits. Owners cannot monitor whether the managers are doing something beneficial for them. So, the owners would like to focus on the internal control system, known as corporate governance (CG) mechanisms, to protect their interests. CG mechanisms are the structure of the board of directors, management committees, and shareholders to support a balance between ownership and management control for effective internal control (SEC, 2017). However, some studies indicated that the role of CG mechanisms can promote applying IC information because IC disclosure can reflect the transparency and management the knowledge–based assets (Samaha, Khlif & Hussainey, 2015). Muttakin, Khan and Belal (2015) stated that CG mechanisms can support utilizing IC to create business opportunities. On the other hand, some studies revealed that CG mechanisms reduce the quality of IC information (Alfraih, 2018), because IC disclosure can become an obstacle to strategic actions. Thus, the relationship between

CG mechanisms and IC disclosure was inconclusive, and this can be explained by the agency theory (Jensen & Meckling, 1976). This theory explains that the relationship between owners and managers has conflicts of interest leading to agency problems. The reason is that IC information is based on the manager's discretion leading to information asymmetry with owners. CG mechanisms can derive IC disclosure to reduce information asymmetry and to align the conflicts of interest between owners and managers (Fama & Jensen, 1983).

This study points out some research problems about the relationship between CG mechanisms and IC disclosure. Prior studies were conducted to examine either financial or non–financial information (e.g., Buallay, 2018; Dashtbayaz et al., 2020). It is little known that CG mechanisms can be associated with IC disclosure on financial and non–financial information at the same periods. Furthermore, previous studies investigated only companies listed on the main capital market, namely, the Stock Exchange of Thailand (SET) (e.g., Suttipun, 2018; Vetchagool, 2022); therefore, there is no evidence on companies listed from the alternative capital market, namely, the Market for Alternative Investment of Thailand (MAI). The MAI's firms have a different characteristic compared to those of the SET's firms. This is because the MAI's firms in emerging economy have lower transparency, and specific corporate ownership attributes to provide assurances to investors and other stakeholders (Tran, Van & Vo, 2020). Thus, this study aims to find out whether CG mechanisms can push more IC disclosure to reduce agency problems and information asymmetries. This study fulfills the gap of IC disclosure literature in Thailand by examining CG mechanisms and relationship with IC disclosure in companies listed on the MAI.

Research Objectives

1. To study the relationship between the corporate governance mechanism and financial disclosure on the intellectual capital.

2. To study the relationship between the corporate governance mechanism and non–financial disclosure on the intellectual capital.

Scope of Research

Content scope: This study is empirical research to investigate the relationship between corporate governance mechanisms and intellectual capital disclosure based on the agency theory.

The independent variables are the corporate governance mechanisms consisting of the board composition, the audit committee, and the ownership structure. The dependent variables are IC disclosure based on financial and non–financial disclosure. The control variables are firm size, firm growth, firm performance, and firm liquidity.

Population and sample scope: The population was 710 firm–year observations in the listed companies on the Market for Alternative Investment (MAI) of Thailand which were selected as the samples by the purposive sampling, excluding companies were registered in financial industries, insurance industries, and leasehold property funds, and were not the fiscal year–ends on 31st December, a rehabilitation, and had incomplete data for analysis, and annual reports were not in English. Finally, observations were outlier data of variables. The sample was 312 firm–year observations.

Area scope: The listed companies on the Market for Alternative Investment (MAI) in Thailand.

Timing scope: During 2015 – 2019.

Literature Review

Agency Theory

Agency theory has been widely useful in accounting studies. Jensen and Meckling (1976) explain that the relationship among two or more parties under a nexus of contracting in firms. The corporate has a principal, as an owner, who hires another person and provides the right for managing firms. Another person is an agent, as a manager, who has the power to manage and decide on the firm's resources. Thus, the firm value can increase or decrease depending on the decisions of managers who receive compensation such as a salary, a bonus, etc. which is a motivation for efficient performance, while owners expect returns from their holdings in firms (Mohd–Saleh & Che Abdul Rahman, 2009). Therefore, the owners expect that the managers will do for the owners' interest, while the managers are likely not to act for the best interests of the owners (Jensen & Meckling, 1976). When they have different interests, there are conflicts of interests leading to agency problems.

Therefore, agency problems can be mitigated by disclosure voluntary information to increase more access to information and to reduce information asymmetry between owners and

managers. Voluntary disclosure including intellectual capital (IC), it is the knowledge asset that can create an added value of firms and can also be managed to integrate in business activities (Yallwe & Buscemi, 2014). IC can reveal the efficient utilization of organization assets for protecting the owners' interests (Dalwai & Mohammadi, 2020). For owners, they have the agency costs to control and monitor the manager's behavior (Watts & Zimmerman, 1983). The Stock Exchange of Thailand issued Corporate Governance Code for Listed Companies 2017, namely CG Code. CG Code indicates that CG mechanisms are the internal control systems showing the structure of the board of directors, management, and stakeholders leading to transparency and reliability of corporate (SEC, 2017). CG mechanisms will engage and rebalance the alignments of interests between the owners and the managers, leading to transparency and trustiness of firms (Appuhami & Bhuyan, 2015). CG mechanisms in this study consist of the board composition, the audit committee, and the ownership structure and relationship with intellectual capital disclosure which proposes six hypotheses.

The board composition and relationship with intellectual capital disclosure

The board composition is the core internal control of firms which has the role to check and balance power managers (Dalwai & Mohammadi, 2020). The committee members have diverse knowledge, visions and experience for seeking opportunities and setting strategies for the business (SEC, 2017). Some studies found that the board composition has an impact on IC disclosure (Muttakin, Khan & Belal, 2015) with the reason that the committee in the board are close advisors and collaborate with top management setting direction about policy and strategy to protect the interests of stakeholders. Conversely, Tran, Van and Vo (2020) indicated that the board composition is a negative effect on IC efficiency. They suggested that the board composition has less experience as an advisory about IC strategic management. Moreover, Dalwai and Mohammadi (2020) found no significant relationship between the board composition and IC disclosure. Therefore, these findings are inconclusive and needed to be further studies to support each concept.

This study believes that the board composition has a key role in deciding whether to disclose IC voluntary information. More disclosure information will effectively monitor the manager's behavior, IC disclosing can reduce the conflict of interest between the owners and the managers. Thus, it is hypothesized that:

H1.1: The board composition is positively associated with intellectual capital of financial disclosure.

H1.2: The board composition is positively associated with intellectual capital of non–financial disclosure.

The audit committee and relationship with intellectual capital disclosure

The audit committee is an independent sub–committee to ensure the accuracy and transparency of corporate reporting, including voluntary disclosure (Madi, Ishak & Manaf, 2014). According to Li, Mangena and Pike (2012), they found that the audit committee is positively related to IC disclosure while Dashtbayaz et al. (2020) stated that there is a significantly negative relationship between the audit committee and IC disclosure. In contrast, Buallay (2018) reported that there is no relationship between the audit committee and IC disclosure. As prior findings were mixed results, this study believes that the audit committee plays a part in the internal control process. They provide correct assurance on corporate reporting, which enhances IC disclosure and ensures the accuracy and transparency of firms. Therefore, in this study, it is hypothesized that:

H2.1: The audit committee is positively associated with intellectual capital of financial disclosure.

H2.2: The audit committee is positively associated with intellectual capital of non–financial disclosure.

The ownership structure and relationship with intellectual capital disclosure

The ownership structure is the proportion of shares held by individuals or group shareholders that shows the voting right to control and protect own interest (Jensen & Meckling, 1976). Moreover, prior studies found that the ownership structure has a positive relationship with IC disclosure (Shahveisi, Khairollahi & Alipour, 2017). As the alignment effect indicates that the majority shareholders help align the interests of the shareholders who have control power with those non–minority shareholders. Conversely, Mohd–Saleh and Che Abdul Rahman (2009) and Tran, Van and Vo (2020) found that the ownership structure has a negative association with IC disclosure. According to Haji and Ghazali (2013), they stated that the entrenchment effect will appear when the majority shareholders can act the right voting for management control. They would decide to use the firm's resources for own interest rather than the interests of minority shareholders. Some studies found that the ownership structure is not associated with IC disclosure (Hidalgo, García–Meca & Martínez, 2011).

As can be seen, the findings are inconclusive which provide opportunities to further research. This study believes that the ownership structure has a large proportion of shares that will extract the wealth of minority shareholders. Thus, IC investing and managing is an activity for obtaining long term benefits that will reduce the wealth of the majority shareholders. In addition, the ownership structure with a high proportion of shares may keep their interest by reducing IC disclosure in order not to lose competitive opportunities. Thus, in this study, it is hypothesized that:

H3.1: The ownership structure is negatively associated with intellectual capital of financial disclosure.

H3.2: The ownership structure is negatively associated with intellectual capital of non–financial disclosure.

Research Methodology

Populations and Samples

The population was 710 firm–year observations in the listed companies on the Market for Alternative Investment (MAI) during 2015 – 2019. This study did not include companies that 41 firm–year observations were registered in financial industries, insurance industries, and leasehold property funds because they have regulations set by the banking and financial institutions that differ from other industries, and 25 firm–year observations were not the fiscal year–ends on 31st December, 1 firm–year observation with a rehabilitation, and 23 firm–year observation had incomplete data for analysis. 254 firm–year observations were also removed because their annual reports were not in English, Finally, 54 firm–year observations were outlier data of variables, and after applying the conditions above, the sample in this study is 312 firm–year observations.

Research Instrument

This study is an empirical study based on secondary data. A research tool of this study employed financial statements, the notes to financial statements, annual reports (form 56–1) during 2015–2019 retrieved from the SET Market Analysis and Reporting Tool (SETSMART database) and the website of the Securities and Exchange Commission of Thailand.

Data Collection

The data in this study were collected by dividing them into two types as follows. First, collect financial information from financial statements and the notes to financial statements. Second,

collect non–financial information and information of corporate governance mechanisms from the annual report of each company and the annual report (Form 56–1) during a five–year period from 2015 to 2019.

Variables and Measurement

Dependent variables

This study used two dependent variables, namely financial disclosure and non–financial disclosure. The financial disclosure on IC (ICFD) for this study is the sum of human capital (HCFD), structural capital (SCFD), and relational capital (RCFD). ICFD made a formulation from the Modified–Value Added Intellectual Coefficient (M–VAIC) model of Ulum, Ghozali and Purwanto (2014), as follows:

$$ICFD = HCFD + SCFD + RCFD \quad (1)$$

Where HCFD = The added value of a company based on the total employee expenses (Pulic, 2000; Vetchagool, 2022).

SCFD = The added value of a company based on the residual value of human capital for generating structural capital (Vetchagool, 2022).

RCFD = The selling expense, marketing, and advertising expenses divided by and the added value of a company (Vetchagool, 2022).

Another dependent variable is the non–financial disclosure on IC (ICNF). ICNF is the total words of human capital disclosure (HCNF), structural capital disclosure (SCNF), and relational capital disclosure (RCNF). ICNF is measured by content analysis because it can be reliably quantified and replicated via statistical analysis (Dumay and Cai, 2015). The keywords in this study were adapted from previous research of Abeysekera and Guthrie (2005), Bozzolan, Favotto and Ricceri (2003), and Li, Pike and Haniffa (2008). The unit of analysis is the number of words on English annual reports for generating the data unbiased. Thus, there is a total of 31 words in this study, as follows:

$$ICNF = HNCF + SCNF + RCNF \quad (2)$$

Where HNCF = total words of human capital include 11 items

SCNF = total words of structural capital include 10 items

RCNF = total words of relational capital include 10 items

Independent variables

This study examines the relationship between corporate governance mechanisms and IC disclosure. The independent variables consist of board composition, audit committees, and ownership structure. The measurement of independent variables consisting of the board composition (BC) is measured by the proportion of independent directors on the total board (Haji & Ghazali, 2013). The audit committee (AC) is measured by the size of the audit committee (Li, Mangena & Pike, 2012). The ownership structure (OWN) is measured by the total percentage of shares owned by top five shareholders (Veltri & Mazzotta, 2016).

Control variables

In terms of control variables, it is important to note that the disclosure of IC can be influenced by various factors. Prior studies determined that firms have a different characteristic affected the level of IC disclosure (Hatane et al., 2018). Therefore, firm characteristics such as firm size, firm growth, firm performance, and firm liquidity were included in the analysis as the control variables. To reduce the likelihood of omitted variable bias (Suttipun, 2018). Four control variables––firm size (FS) is measured by the natural logarithm of total assets (Alfraih, 2018), firm growth (MTB) is measured by the equity market value divided by book value (Kamath, 2017), firm performance (ROA) is measured by the net income before interest and tax divided by average total assets (Haji & Ghazali, 2013), and firm liquidity (LIQ) is measured by ratio of current assets divided by current liabilities (Shahveisi et al., 2017).

Data analysis

The data were analyzed using descriptive statistics, and a correlation analysis. The relationship between corporate governance mechanisms and IC disclosure and the control variables were analyzed with panel data analysis consisting of both cross–sectional and time series data from the 312 firm–year observations. The panel data analysis was employed to evaluate group individual effects or time effects, or both to deal with the heterogeneity (Piriyakul, 2016). The appropriate model in this study was the random effect (RE) model based on the statistical value of Hausman test (Park, 2011). Thus, this study used the following equations:

$$ICFD_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 AC_{it} + \beta_3 OWN_{it} + \beta_4 FS_{it} + \beta_5 MTB_{it} + \beta_6 ROA_{it} + \beta_7 LIQ_{it} + \varepsilon_{it} \quad (3)$$

$$ICNF_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 AC_{it} + \beta_3 OWN_{it} + \beta_4 FS_{it} + \beta_5 MTB_{it} + \beta_6 ROA_{it} + \beta_7 LIQ_{it} + \varepsilon_{it} \quad (4)$$

Results

Descriptive Statistics

This section explains the result of descriptive analysis for the basic characteristic of variables which is based on the sample of 312 firm–year observations on the MAI during 2015–2019. The results of descriptive statistics are corporate governance mechanisms variables and intellectual capital disclosure variables, as follows.

The results of descriptive analysis for corporate governance mechanisms consist of the proportion of independent directors on the total, the size of the audit committee, and the total percentage of shares owned by top five shareholders. The mean proportion of independent directors on the total is 43.77 percent, with minimum and maximum values ranging from 30 to 71.43. This indicates that most companies comply with CG Code indicates that the number of independent directors be at least one–third of the total number of all directors of the board and that there must not be at least three independent directors (SEC, 2017). The mean of the audit committee size is 3.11, with minimum and maximum values ranging from 3 to 5. Most companies have the audit committee size that is approximately three persons required by CG Code. The audit committee size has at least three members who are independent and non–executive directors (SEC, 2017). The mean of the total percentage of shares owned by top five shareholders is 59.81, with minimum and maximum values ranging from 27.01 to 92.53. This indicates that the high proportion of shares owned is likely to limit access to voluntary information from minority shareholders (Fama & Jensen, 1983). This is the conflict of interest between majority and minority shareholders, particularly in emerging economy (Tran, Van & Vo, 2020).

The results of descriptive analysis for Intellectual capital disclosure were divided into financial disclosure and non–financial disclosure on IC. The mean value of financial disclosure on IC in year 2015 was 3.06, and during the year 2016–2017, the mean value was 2.51 which was declined and stabilized in 2016. In the year 2017, the mean value of financial disclosure on IC rose to 2.80, and in 2018 the mean value dropped to 2.78 and 2.49 in 2019. For non–financial disclosure on IC, the mean values were 134.66, 149.10, 164, 180.89, and 173.92 words. The mean value of non–financial disclosure on IC increased during 2015–2018 and dropped in 2019.

Correlation Metrices

Table 1 demonstrates the results of the Pearson correlation analysis of the multicollinearity among the variables used in this study. The results show statistical significance of the correlation

coefficient at two levels, namely at .01 level or .05 level. The variable values ranging from 0.150 to 0.428 are at 0.01 level while those from 0.067 to 0.155 are at .05 level. Thus, the maximum value of the correlation coefficient between the explanatory variables is lower than 0.80 and does not produce multicollinearity problem (Hair et al., 2010).

Table 1 Correlation matrix

Variables	ICFD	ICNF	BC	AC	OWN	FS	MTB	ROA	LIQ
ICFD	1								
ICNF	0.074	1							
BC	0.143**	0.152***	1						
AC	0.107	0.124**	0.101	1					
OWN	0.011	–0.035	–0.069	0.178***	1				
FS	0.428***	0.150***	0.106	0.184***	0.004	1			
MTB	–0.022	–0.073	0.107	0.019	0.000	–0.099	1		
ROA	0.425***	0.071	0.006	–0.029	0.092	0.080	–0.155**	1	
LIQ	–0.067**	0.006	–0.028	0.075	0.141**	–0.336***	–0.124**	0.156***	1

Note: ***, ** indicate statistical significance at the .01, .05 levels, respectively.

Regression Results

Before the results of testing the hypotheses were demonstrated, the data were tested the reliability to ensure that the models were accurately tested. The appropriate model of panel data was the RE model, which was an effective estimation. This was because the estimation of RE model was affected by the unobserved subject–specific characteristics, for example, company characteristics (Piriyakul, 2016). Table 2 demonstrates that the dependent variables of IC disclosure are ICFD and ICNF, the independent variables of CG mechanisms are BC, AC, and OWN, and four control variables are FS, MTB, ROA, and LIQ. Thus, this study used these variables to examine the relationship between CG mechanisms, control variables, and IC disclosure, it also used the robust standard errors option to generate the RE model effective estimation (Park, 2011).

Table 2 shows the results of model 1 and model 2 shows the R squared value are 0.35, and 0.06, respectively. In addition, the F–test value of both models are statistically significant at the .05 level that regression models are fit to predict dependent variable. In addition, the variance inflation factor (VIF) test shows multicollinearity among the independent variables. The maximum

VIF value of both models is 1.254, it is not multicollinearity problem because the VIF value is lower than 10 (Gujarati & Porter, 2009).

Table 2 Regression Analysis Results

Variables	Hypotheses	Model 1: ICFD			Model 2: ICNF		
		Coef.	t–test	p–value	Coef.	t–test	p–value
Intercept		–11.727	–4.15	0.000***	–149.785	–1.42	0.154
BC	H1.1	0.016	1.25	0.212			
AC	H2.1	0.012	0.05	0.957			
OWN	H3.1	–0.014	–1.72	0.085*			
BC	H1.2				1.151	2.62	0.009***
AC	H2.2				19.934	2.76	0.006***
OWN	H3.2				0.138	0.43	0.668
FS		–0.610	–1.00	0.322	13.354	1.74	0.081*
MTB		–0.016	–0.46	0.645	–1.405	–1.66	0.098*
ROA		0.164	2.53	0.013**	–0.002	–0.01	0.991
LIQ		0.071	0.73	0.465	1.100	0.47	0.641
R^2			0.35			0.06	
F–value			23.73**			2.82**	
p–value			0.000			0.007	
Hausman test							
(Chi^2–statistic)			7.88			2.66	
p–value (Chi^2)			0.343			0.911	
Maximum VIF			1.254			1.254	

Notes: This table shows the random effect regression with robust standard errors clustered at firm level.

*** Significant at p< .01, ** significant at p< .05, and * significant at p< .10.

The objective 1 is to study the relationship between the corporate governance mechanism and financial disclosure on the intellectual capital. The evidence shows the regression results of model 1 in Table 2 for the hypotheses 1.1, 2.1, and 3.1. The coefficient on OWN is negatively associated with ICFD at the significance level of .01. Thus, H3.1 is supported. The coefficient on BC is not significantly associated with ICFD. The coefficient on AC is not significantly associated with ICFD. Hence, these findings do not provide support for H1.1 and H2.1. In addition, the results of the control variables indicate that the coefficient on ROA has positive significance with ICFD at the level of .05. The high firm performance leads to investment with IC for long–term growth. The three control variables––firm size, growth, and liquidity (FS, MTB, and LIQ)––are not significant with ICFD.

The objective 2 is to study the relationship between the corporate governance mechanism and non–financial disclosure on the intellectual capital. The results of the hypotheses 1.2, 2.2, and 3.2 are shown in model 2 in Table 2. The coefficient on BC is positively associated with ICNF at the significance level of .01. The coefficient on AC is positively associated with ICNF at the significance level of .01. Thus, H1.2 and H2.2 are supported. The coefficient on OWN is not significantly associated with ICNF: hence, H3.2 is not supported. Finally, the results of the control variables have significance on ICNF, which firm size (FS) has positive significance at the level of .10, while firm growth (MTB) has negative significance at the level of .10. The two control variables (ROA and LIQ) are not significant with ICNF.

Discussion

According to the objectives of this study, the discussion of the finding can be explained as follows. The finding of **objective 1** is the relationship between CG mechanisms and financial disclosure on IC in this study. It can be explained that the proportion of independent directors on board is not significantly associated with IC efficiency. This means that the high proportion of independent directors on the board does not support IC investment efficiency which is consistent with the finding of Dalwai and Mohammadi (2020) and is not consistent with Muttakin, Khan and Belal (2015). It is probable that independent directors are not in a strategic position to support investment in IC efficiency. Audit committee size is found to be not significant with financial disclosure on IC. This is explained that the number of audit committees that cannot discover the material risk of IC investing. This finding is consistent with Buallay (2018) but is inconsistent with the finding of Li, Mangena and Pike (2012). A reason why the audit committee size is insignificant is because IC investing is recognized as expenditure on the financial report; as a result, the audit committee focuses mainly on reviewing the mandatory financial information of firms. The finding of ownership structure has a significant negative association with financial disclosure on IC, which is consistent with Tran, Van and Vo (2020). The reason for a negative relationship is that the top five shareholders have the right vote to reduce IC investment. They may expect that IC investment may increase less profitability than investment in tangible assets.

Moreover, the finding of **objective 2** is the relationship between CG mechanisms and non–financial disclosure on IC. It is found that the high proportion of independent directors is positively

related to non–financial information on IC disclosure. This is consistent with Muttakin, Khan and Belal (2015), who say that the high proportions of independent directors on board can increase the board's ability to make decisions and collaborate with managers. The result of the audit committee size can increase the level of voluntary IC information, which is consistent with Li, Mangena and Pike (2012). The audit committee can contribute to more and better IC voluntary disclosure relating to financial reporting practices. They have a crucial role in monitoring and ensuring managers to inform IC management and utilization on behalf of the shareholders for the efficient operation. While the result of top five shareholders has no statistical significance with non–financial information on IC disclosure. This is consistent with Hidalgo, García–Meca and Martínez (2011) but it is inconsistent with Mohd–Saleh and Che Abdul Rahman (2009). This is possible that the concentrated ownership structure tend to avoid IC disclosing because it can explain value creation activities. IC voluntary disclosure creates a comparison of MAI's firms' performance and results in the reduction of competitive advantages.

Therefore, the interesting finding of this study is that independent directors and audit committees have the main roles to drive more IC disclosure. Independent directors play an important role in balancing the interests of the managers and the owners through integrating IC resources in business strategies. They can push top management to provide a greater direction of strategies and how to manage IC resources for competitive opportunities. The audit committee is important for firms to be transparent and to trust the manager's action and impact by using IC in business activities for stakeholders. In terms of the concentrated shareholders, they focus on a greater performance for their interest based on the profits or losses of firms. Thus, when the managers decide to invest, IC is likely to be an obstacle in keeping profitability as the IC expenditure reduces their expected outcome. This is in line with the agency theory (Fama & Jensen, 1983) that the proportion of independent directors on board can communicate and support the use of IC for business competitive advantages. The size of audit committee can enhance transparency and trustworthiness to shareholders. Independent directors have the duty to control the actions of the managers, and that can reduce agency problems. Moreover, the larger size of audit committee ensures effective internal control and monitoring IC disclosure on annual reporting. While the top five shareholders focus on their own interest, they do not actively generate efficient IC resources for firm growth.

Conclusions

This study examined the relationship between corporate governance mechanisms consisting of independent directors, audit committee, ownership concentration and intellectual capital (IC) disclosure. The data were collected from 312 firm–year observations of companies listed in the Market for Alternative Investment (MAI) in Thailand, during 2015–2019. The findings in this study showed interesting points. In one hand, there was a positive relationship between the proportion of independent directors on board, the size of audit committee and non–financial disclosure on IC, while the top five shareholders had a negative relationship with financial disclosure on IC disclosure. On the other hand, the finding of the proportion of independent directors, the size of audit committee had no significantly associated with financial disclosure on IC, and top five shareholders had no associated with non–financial information on IC disclosure.

Suggestion

The finding of this study suggests several implications, as follows.

Theoretical:

This study expands the contribution of the literature on IC disclosure in an emerging economy. The result of this study fills the gap because most prior literature has focused on either financial disclosure or non–financial disclosure, not both conducted at the same time. In addition, the finding shed light on the agency theory to emphasize that CG mechanisms can work as coordinators to point out the importance of IC information and as voluntary disclosure leading to mitigating the agency problems between shareholders and managers. Due to this, shareholders can perceive the manager's action whether they will do something to maximize firm value.

Managerial:

The finding is the first longitudinal study for five years to provide the empirical evidence on IC voluntary disclosure on the alternative capital market in Thailand, as the MAI. While most prior studies focused on the main capital market. The result can be supported that the CG mechanisms can monitor and detect both financial and non–financial information on IC disclosure to improve the better quality of voluntary disclosure practice for the MAI's firm.

Future Research:

Firstly, the corporate governance mechanisms consist of board composition, audit committee, and ownership structure. The corporate governance mechanisms have other proxies that can investigate possible association with IC disclosure based on financial and non–financial information. Future research should continue by using other proxies to examine the effects of corporate governance mechanisms on IC disclosure. Secondly, the corporate governance mechanisms and relationship with IC components are not investigated in this study. Thus, the future study could investigate the relationship between these variables.

New Knowledge

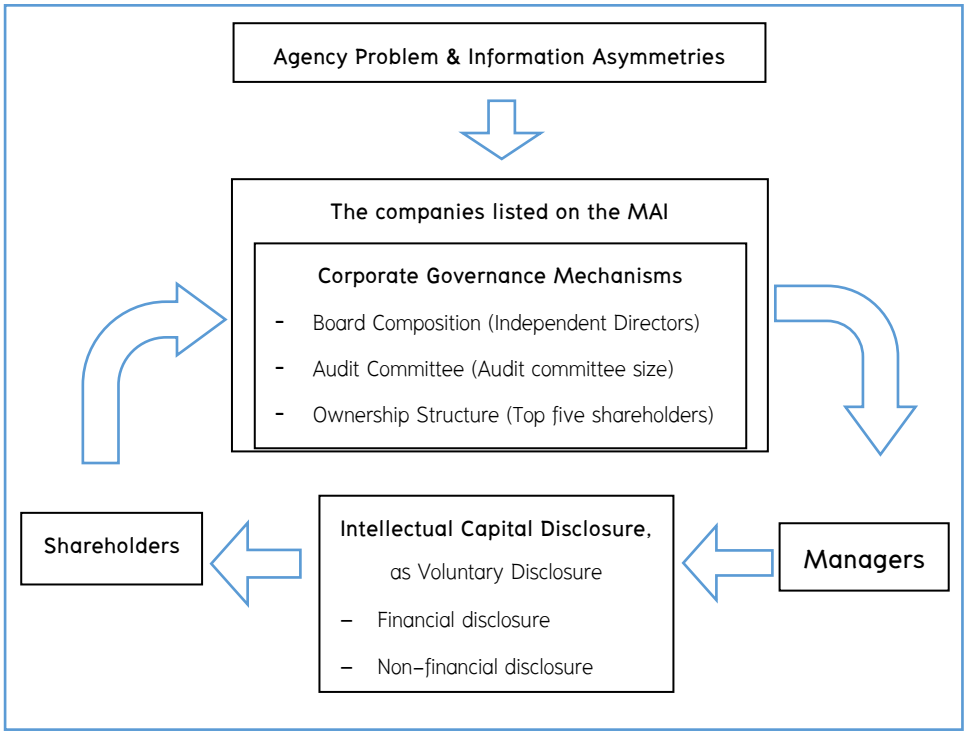

Figure 1 The relationship between corporate governance mechanism and intellectual capital disclosure

The MAI's firms have uncertainty and incomplete information affect low voluntary disclosure leading to the agency problem between shareholders and managers. The findings in this study add the new knowledge of corporate governance mechanisms and indicate its crucial role in disclosing IC to reduce agency problems and information asymmetries between owners and managers in the MAI's firms. This study underlines that IC voluntary information is useful among internal users in firms on the MAI. In addition, corporate governance mechanisms are associated with IC voluntary

disclosure based on financial and non–financial information. This is different from prior studies in Thailand as IC information was measured by either financial or non–financial information. Furthermore, the findings provide new knowledge that a good corporate governance mechanism can track the manager's behavior in developing firm resources including IC for stakeholders in the listed firms' MAI.

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