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THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND INTEGRATED REPORTING: THAI EVIDENCE

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ABSTRACT

This study aimed to investigate the extent and level of integrated reporting in annual reports of companies in the Stock Exchange of Thailand between 2012 and 2015, test for differences in the level of integrated reporting during the period being studied, and examine the relationship between corporate governance and the level of integrated reporting. By simple random sampling, 150 firms were selected as the sample. Content analysis was used to quantify the integrated reporting. The results found that the companies provided 603.59 words of integrated reporting. Within the six categories of capital falling within the scope of integrated reporting, intellectual capital reporting was the most commonly reported category, while environmental capital reporting was the least commonly reported category. There were significantly increased levels of integrated reporting between 2012 and 2015. There were significant positive relationships between institution-owned firms, board size, companies given CSR awards and the level of integrated reporting.

***Keywords**:* Integrated reporting; Corporate governance; the Stock Exchange of Thailand

1. INTRODUCTION

The perspective of corporations in today's world is broader than purely economic since their influence extends into both the societal and environmental domains. Due to globalization and the growth of non-financial regulation, corporations have to take responsibility for their financial and non-financial governance, and other important areas including corporate transparency and accountability, actual and prospective resource scarcity, population growth, and environmental concerns. Information reporting and disclosure are an important part of corporate actions and activities. The information contained in financial and non-financial reports has tended to be presented quite separately, and this may lead to confusion among corporate stakeholders. Moreover, traditional annual financial reports and non-financial reports are retrospective and do not deal with future targets or crucial risks that might become relevant in the future. Traditional corporate annual financial reports and stand-alone non-financial reports also fail to connect societal, environmental, and governance issues to core corporate business strategy and financial performance. Therefore, a combination of both types of reporting would raise awareness of the

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long-term sustainable development view, increase the comparability of global corporations, and reduce corporate reputational risk.

In early forms of combined financial and non-financial information reporting such as triple bottom line reporting (Elkington, 1997), and sustainable development reporting (GRI, 2002), the annual report represented the main medium for the company to report to its stakeholders. However, disclosure through this medium raises some concerns. For example, the inclusion of non-financial with financial information is normally a form of voluntary reporting in which companies may choose to provide only good news in their disclosures of non-monetary information, whereas in their mandatory financial reporting the information disclosed must be a full and fair reflection of the company's financial affairs. Moreover, there may be no standards of reporting, and it may therefore, be hard to compare financial and non-financial information reporting between companies. These problems can be solved by the adoption of integrated reporting which incorporates either mandatory or comply-or-explain reporting as standard practice. Moreover, integrated reporting links financial and non-financial information together with corporate strategy, governance, risk management, future prospects, and performance in communication (IIRC, 2013).

Integrated Reporting is the combined reporting of financial and non-financial information and was launched by the International Integrated Reporting Committee (IIRC) in 2010 (IIRC, 2012). Integrated reporting works as a corporate management tool and combines traditional financial reporting with sustainability (non-financial) performance (IIRC, 2013). It is a way of logically codifying corporate financial and non-financial information reporting. The scope of integrated reporting includes strategic focus, connectivity of information, future orientation, responsiveness to stakeholders, and governance and remuneration (Integrated Reporting Committee of South Africa, 2011). Moreover, the concept of integrated reporting applies equally to small and medium enterprises, the public sector, and non-profit organizations. Integrated reporting also provides a broader explanation of corporate performance than the traditional approach as manifested by the traditional annual report (IIRC, 2013). Nowadays, companies in developed countries such as Australia (Stubbs and Higgin, 2014), New Zealand (Jensen and Berg, 2012), South Africa (Rensburg and Botha, 2014), and European countries (Frias-Aceituno et al., 2014) have adopted integrated reporting as their preferred manner of reporting their performance using a single report (Frias-Aceituno et al., 2014).

However, integrated reporting is a fairly new reporting framework in Thailand. Therefore, it is not clear why corporations would adopt it as their manner of reporting, and there is currently a lack of empirical studies on the subject (De Villiers et al., 2014). Most companies in the Stock Exchange of Thailand (SET) are in the early stages of adopting integrated reporting so that most of the information available about integrated reporting is based on concepts and theories rather than empirical studies. Prior studies of integrated reporting have been conducted in countries where integrated reporting has already become mandatory or where comply-or-explain reporting has been mandated such as South Africa (Solomon and Solomon, 2006; Rensburg and Botha, 2014), European countries (Garcia-Banau et al., 2013), Australia (Higgins et al., 2014; Stubbs and Higgins, 2014), and New Zealand (Jensen and Berg, 2012). The integrated reporting can be important reporting of Thai companies as well as companies in developed countries because it can combine both financial and non-financial disclosures within one report, and can reflect the corporate sustainable development (Suttipun and Saelee, 2015). However, none of the countries who have introduced mandatory integrated reporting are amongst the emerging economies and this includes Thailand where the degree of sustainability reporting and regulation is still unclear. A review of relevant literature indicates a dearth of prior studies of integrated reporting in Thailand. Unlike traditional financial information reporting where auditing opinions are provided in accordance with accounting and auditing standards, both financial and non-financial information reporting in integrated reporting are more subjective and there is a lack of a clear set standard. Therefore, it is difficult to provide a definitive opinion about integrated reporting (Reverte, 2015). Further, there have been no longitudinal studies of integrated reporting and there is, therefore, a lack of knowledge about the pattern of reporting. One of the most important factor to let the companies providing integrated reporting was corporate governance (Cheng et al., 2014). For example, Cheng et al. (2014) and Ahmed and Ghazali (2013) tested the relationship between corporate governance and integrated reporting. But, there has been no study of the relationship between corporate governance and integrated reporting in Thailand. Therefore, this study aimed to fill this lacuna in the reporting literature.

To investigate the research problems above, this study had three objectives. First, the study investigated the extent, and level of integrated reporting in the annual reports of companies listed in the Stock Exchange of Thailand (SET) during 2012 to 2015. Testing the different levels of integrated reporting in annual reports of companies listed in the SET during the period being studied was the second objective. Finally, the study examined the relationship between corporate governance and the level of integrated reporting in the annual reports of companies listed in the SET.

The organization of the remainder of this article is as follows: Section 2 describes the theoretical perspectives adopted in conducting the research. In section 3, literature review and hypothesis development are indicated. Details the study methodology are presented in section 4, while the findings and discussion are tested in section 5. Finally, concluding remarks and recommendations are provided in section 6.

2. THEORETICAL PERSPECTIVES

In this study, legitimacy theory was employed to explain the extent and level of integrated reporting in the annual reports of the SET-listed companies as well as the trend of integrated reporting during 2012 to 2015, while agency theory was used to explain the relationship between corporate governance and integrated reporting.

2.1. Legitimacy Theory

Emeseh and Songi (2014) noted that stakeholder and legitimacy theories are the dominant theoretical explanations for voluntary reporting, including integrated reporting. Within legitimacy theory, companies have to fulfill societal expectations, if they do not wish to pay penalties or jeopardize their survival (Gray et al., 1995). According to Nurunnabi et al. (2001), corporations are part of a society, and for a business to be regarded as a good citizen, its actions must be in line with societal expectations. Therefore, financial and non-financial (voluntary) information reporting, including integrated reporting is used to indicate compliance with societal norms and expectations (Brown and Deegan, 1998; Emeseh and Songi, 2014).

Societal expectations have been seen as the main driver for the development of integrated reporting because society requires companies to meet societal expectations rather than operating with a narrow focus on financial performance (Vilanova, 2007). Thus, companies have been influenced by societal expectations to increase not only the amount of financial information they report but also their non-financial information reporting, which has been linked to corporate sustainable development and greater long-term financial performance (Ali, 2015). For example, according to Deegan (2002), corporations are more likely to undertake voluntary information disclosures when their legitimacy is under threat and when this poses a risk to their operation.

2.2. Agency Theory

Agency theory is concerned with the relationship between principals (owners) and agents (management), in which the former commission the latter to manage a business organization on their behalf so as to maximize the firm's value (Jensen and Meckling, 1976). In so doing, the agents formulate and implement strategic plans. As long as their interests are congruous, conflicts between the two parties rarely materialize. There are, however, occasions when their business goals are not synchronous leading to conflicts of interest. According to Mele (2008), conflicts of interest such as those arising from arguments about benefits, moral hazards and adverse selection problems, increase agency costs and reduce firm value. In addition, Healy and Palepu (2001) found that increased agency costs contributed to the lowering of the value of corporate shares, poor management reputation, and the higher cost of capital. To reduce agency costs, Frias-Aceituno et al. (2014) found that the corporation has to be interested in publishing greater volumes of information as a monitoring function. The reason is to reduce financial statement users' uncertainty as to the quality of financial reporting (Bronson et al., 2006). Therefore, the corporations may disclose voluntary information to explicitly state. Moreover, disclosing more information also reduces the problem of information asymmetry.

According to Cerbioni and Parbonetti (2007), the issue of conflicts of interest can be mitigated by the adoption of integrated reporting because it offers the owners a means to access more comprehensive corporate information and at the same time increases the accountability and transparency of the management. This study utilized agency theory to explain the connective framework of corporate governance represented by ownership structure and board composition, and voluntary corporate integrated reporting because ownership structure and board composition represent an important corporate governance mechanism through which agency problems and information asymmetries can be reduced (Shamil et al., 2014). In terms of board composition, for example, board of directors is appointed to monitor managers' actions to reduce agency problems and costs (Jensen and Meckling, 1976; Fuma and Jensen, 1983). To respond the internal monitoring mechanisms, and to mitigate agency costs, the managers have to improve quantity and quality of disclosures in capital market. The managers, therefore, can get benefit from information advantage to increase firm value and management incentives. To extend the conception of integrated reporting, managers may provide the integrated reporting to reduce agency costs and minimize stringent internal monitoring (Shamil et al., 2014). Therefore, agency theory can explain the relationship between corporate governance and integrated reporting.

3. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Although, there have been no previous studies testing the relationship between corporate governance and integrated reporting in Thailand, this study adopted reporting tools used to investigate the reporting of other financial and non-financial information such as sustainable development reporting, triple bottom line reporting, intellectual capital reporting, and other voluntary forms of reporting. Therefore, there were seven hypotheses tested in this study which fall into three main groups of corporate governance and characteristics consisting of ownership structure, board composition, and CSR award.

3.1. Ownership Structure

In the Asian context including Thailand, it is common for companies to be run from one generation to the next in a family business structure. In this kind of business the major group of stakeholders are family members (Lu and Batten, 2001). Moreover, the top management and the major shareholder may be either the same person or people from the same family. Haniffa and Cooke (2002) suggested that the status of a business as a family owned company could have an effect on both financial and non-financial information reporting since family businesses tend to provide less voluntary reporting than non-family businesses because they prefer to keep some information private within their family (Ahmed and Ghazali, 2013). On the other reason, in a non-family-owned business, voluntary reporting is used to act as a bonding and monitoring tool reducing agency problems and conflicts between owners and managers (Jensen and Meckling, 1976). Moreover, this type of companies may have more various and larger number of owners than family-owned companies. The issue of public accountability including voluntary reporting may be demanded by the various owners as well as mandatory reporting (Ghazali, 2007). Therefore, it may be expected that family-owned companies, on the other hand, are negatively associated with the level of voluntary reporting including the integrated reporting. Previous literatures, for example, indicate a negative correlation between the family ownership structure and both financial and non-financial information reporting, which would extend to integrated reporting (Ho and Wong, 2001; Haniffa and Cooke, 2002; Ahmed and Ghazali, 2013). Thus, this study hypothesized that:

H1: There is a negative relationship between family owned companies and integrated reporting.

In Thailand, some companies listed in the SET are government-owned organizations (Out of 150 sample used in this study, there were 35 government-owned companies). These companies will come under more pressure from societal expectations than privately owned companies, therefore, government-owned companies need to serve societal expectations including how and what information they report. However, the results of prior studies investigating a possible relationship between government-owned companies and financial and non-financial information reporting (which would extend to integrated reporting) have been mixed. On the one hand, Cormier and Gordon (2001) found that government-owned companies provided more corporate social responsibility reporting than private companies because government companies are subject to greater scrutiny, so there is pressure from the state as owner, and from the mass media to meet societal expectations. On the other hand, Balal (2000) found that privately owned companies provide more environmental disclosures than government-owned companies because they are subject to more pressure from government regulations than are state-owned companies. However Suttipun (2012) found no indication that government-owned companies are more inclined to employ triple bottom line reporting on websites than are privately owned companies. However, this study hypothesized that:

H2: There is a positive relationship between the percentage of government-owned companies and the level of integrated reporting.

El-Gazzar (1998) found that a higher proportion of institutional ownership of companies positively affected the level of corporate information reporting. This is because the institutions are owned by various groups of owner, therefore, the institutions mush cautiously supervise all of their investments including listed companies from the Stock Exchange of Thailand where they invested. The pressure of institutions' supervision can make the companies provide much information including the level of integrated reporting in order to reduce the agency problems. Koh (2005) defined the institutional ownership as percentage of common stock owned by financial institution, insurance companies, pension funds and investments. In Thailand, Pongtontakul (2003) found that there was a positive relationship between the percentage of institutional ownership of companies listed in the SET and the quantity and quality of their non-financial reporting. He claimed that companies with a higher percentage of institutional ownership can reduce their agency costs and conflicts of interest between their owners and management. Thus, this study hypothesized that:

H3: There is a relationship between the level of integrated reporting and the percentage of institutional ownership of companies. .

3.2. Board Size and Composition

The literature relating to the relationship between board size and financial and non-financial information reporting includes a number of studies which have produced a similar result of a positive correlation between the size of the board of directors and voluntary reporting (Ahmed and Ghazali, 2013; Abeysekera, 2010; Cerbioni and Parbonetti, 2007). The reason of positive relationship between board size and integrated reporting may be because a larger board tends to pay more attention to social expectations about corporate decision making than a smaller board size (Abeysekera, 2010). Therefore, the larger board may improve the monitoring of corporate actions and activities in the interests of society including financial and non-financial information reporting (Dalton and Dalton, 2005). In Thailand, prior studies have found a positive relationship between the size of the board and triple bottom line reporting (Chamnankij and Suttipun, 2016), and between board size and environmental reporting (Naklerd and Suttipun, 2016). Therefore, this study tested the hypothesis that:

H4: There is a positive relationship between the size of the board of directors and integrated reporting.

Ho and Wong (2001) found a positive correlation between the proportion of independent members of the board and corporate responsibility reporting in the annual reports of listed companies in Hong Kong. Haniffa and Cooke (2005), Ahmed and Ghazali (2013), and Li et al. (2008) also found positive relationships between the proportion of independent members of boards and intellectual capital reporting. Moreover, Kathyayini et al. (2012) found a positive correlation between the proportion of independent board members and environmental disclosures because the independence of the board members who hold no managerial position makes them less opportunistic and more attentive to societal expectations. In addition, independent board members often include advocates of both financial and non-financial information reporting, including integrated reporting (Li et al., 2008). According to agency theory, the presence of independent members on a board can control and reduce the management's opportunity for the competence, independence and objectivity necessary for the function of control (Ho and Wong, 2001). Moreover, Fama and Jensen (1983) argued that the presence of more independent members on the board of directors makes that board more effective, with the companies having to disclose more information. Nevertheless, Chamnankij and Suttipun (2016) found no relationship between the proportion of independent board members and triple bottom line reporting on websites. However, this study hypothesized that:

H5: There is a positive relationship between the proportion of independent members of boards of directors and integrated reporting.

CEO duality is common in SET-listed companies (SET, 2015). According to agency theory, CEO duality has influenced in decision making to provide more financial and non-financial information disclosures to fulfill a monitoring function (Ahmed and Ghazali, 2013). However, CEO duality could lead to low information reporting and therefore to limited financial and non-financial information reporting (Cerbioni and Parbonetti, 2007). In addition, Cerbioni and Parbonetti (2007) reported a negative relationship between CEO duality and intellectual capital reporting by European companies. Similar findings were noted in Li and Manyena (2014), who examined listed firms in the U.K. On the other hand, Taliyang and Jusop (2011) studied listed Malaysian firms and found no relationship between CEO duality and intellectual capital disclosure as did Cheng and Courtenay (2006). It was thus hypothesized that:

H6: There is a negative relationship between CEO duality and integrated reporting.

3.3. CSR Award

Although there were several variables of corporate characteristics influencing voluntary reporting (Ho and Taylor, 2007; Raar, 2002), no relationship between size of company, type of industry, profitability, leverage, and the level of voluntary reporting in Thai context such as corporate social responsibility reporting (Suttipun and Nuttaphon, 2014; Suttipun, 2014), and Triple Bottom Line reporting (Suttipun, 2012). However, Suttipun (2014) found that there was a positive relationship between CSR award and voluntary reporting. In Thailand, to support the larger number of companies listed in the SET that embrace the concept of sustainable development, the SET has awarded the corporate social responsibility (CSR) award since 2006 to its listed companies which rewards their social and environmental responsibility including making CSR disclosures to stakeholders as well as fulfilling their economic responsibility to shareholders, investors, and creditors. The goal of the CSR award is to encourage companies to balance their economic, societal, and environmental responsibility and to develop corporate sustainability. Suttipun (2014) and Deegan and Gordon (1996) found a positive relationship between CSR awards and financial and non-financial information reporting because the CSR award is an indicator of how companies satisfy societal expectations through both societal and environmental responsibility as well as exercising financial responsibility. However, Raar (2002) found no significant correlation between CSR awards and social and environmental information reporting. Therefore, the study hypothesized that:

H7: There is a positive relationship between CSR awards and integrated reporting.

4. METHODS

This section is covers three aspects: the population, sample and sampling method, variable measurement tools, and data analysis. In this study, the population was all the SET-listed companies during the period 2012–2015, excluding (1) those whose fiscal year end is not 31st December; (2) firms under rehabilitation; and (3) firms that were registered in the Market for Alternative Investment of Thailand (MAI). By simple random sampling, 150 out of the 553 listed companies were selected as the study samples. This is because (1) by Yamane (1973) sampling, if this study used all corporate annual reports during 2012 to 2015 as 2212 population of annual reports, the sample size was calculated as 339 annual reports in static error at 0.05 level, and (2) sample size used in this study was greater than the prior related studies in Thailand such as 63 Thai listed companies in 1993 and 84 companies in 1999 by Kuasirikul and Sherer (2004), 50 listed companies in 2010 by Suttipun (2012), and 100 listed companies by Suttipun (2015). Moreover, this study included companies in financial industry as one of sample because although financial companies were excluded by previous literatures (Kuasirikul and Sherer, 2004) because of more and different regulation with the other industries, the integrated reporting was not mandatory reporting, therefore, this is interesting to test whether companies in financial industry would like to provide the integrated reporting in their annual reports. This study utilized only annual reports during the period 2012 to 2015 to quantify the extent, pattern, and level of integrated reporting because they are the source of information which has been most widely adopted and well justified in previous related studies (Li et al., 2012; Bozzolan et al., 2003).

For the measurement of the dependent variable, content analysis was used to quantify the extent, pattern, and level of integrated reporting because this has been the most common method used to assess the reporting of non-financial information (Gray et al., 1995) and has been used in many previous studies (Raar, 2002). Moreover, Krippendorff (1980) asserted that content analysis is a technique allowing a replicable and valid inference to be drawn from data according to the context. Word count from annual reports was used as the analysis unit because it can be more easily categorized and needs less subjective judgment by the researcher (Gamerschlag et al., 2011). The guideline of what constituted integrated reporting adopted in this study was reporting related to the six capitals described in the International Integrated Reporting Framework (IIRC, 2013). Integrated reporting is divided into disclosures relating to the six capitals consisting of financial, manufactured, intellectual, human, social, and environmental as key corporate performance indicators (IIRC, 2012).

The seven independent variables were assessed based on the measures set out in table 1. They fell within two groups relating to corporate governance consisting of ownership structure (family-owned companies, government-owned companies, and institution-owned companies) and board composition (size of board, independent board members, and CEO duality) (See Table 1). Although there have been no previous studies investigating the relationship between corporate governance and integrated reporting in Thailand, the variables relating to ownership structure and board composition have previously been used to test for correlations with financial and non-financial information reporting such as sustainable development reporting (Frias-Aceituno et al., 2014; Suttipun, 2015), triple bottom line reporting (Raar, 2002; Suttipun, 2012), and intellectual capital reporting (Li et al., 2012; Li and Mangena, 2014). Moreover, this study used CSR award companies as another independent variable. All the independent and dependent variables used in this study were sourced from company profiles appearing on the website of the SET (www.set.org.th).

Table 1: Variable Measurement

Variable	Notation	Measurement
Integrated reporting	*IR*	Content analysis by word count
Family-owned firms	*FAMOWN*	Percentage of common stock owned by family. Family member is included all family member, relative, and in-laws.
Government-owned firms	*GOVOWN*	Percentage of common stock owned by government
Institution-owned firms	*INSTITU*	Percentage of common stock owned by financial institutions, insurance companies, and pension fund and investment
Size of board	*BSIZE*	Number of board members
Independent board members	*PID*	Proportion of independent board members including independent non-executive
CEO duality	*DUAL*	1 for CEO duality, and 0 for otherwise
CSR award firms	*CSRAW*	1 for CSR award firms, and 0 for otherwise

All the data was hand collected and it was analyzed using three meethods: descriptive analysis was used to quantify the extent, pattern, and level of integrated reporting in annual reports of Thai listed companies; paired sample t-tests were used to test for differences in the level of integrated reporting in the annual reports of SET listed companies sampled during the period being studied, and multiple regression was used to test for possible relationships between corporate governance and the level of integrated reporting in annual reports. A model was used in this study as follows:

$$IR = a + b1FAMOWN + b2GOVOWN + b3INSTITU + b4BSIZE + b5PID + b6DUAL + b7CSRAW + error$$

5. FINDINGS AND DISCUSSION

Based on the annual reports of the 150 companies sampled in this study, all the companies used integrated reporting between 2012 and 2015. By descriptive analysis (See Table 2), the average number of words of integrated reporting during the period being studied was 603.59 words and there was an increased level of integrated reporting year by year. When the integrated reporting was divided into reporting relating to the six capitals, reporting, relating to intellectual capital was the most common form with an average of 180.44 words followed by social (average: 129.27 words), financial (average: 116.08 words), human (average: 76.77 words), manufactured (average: 59.05 words), and environmental (average: 41.98 words). The reason of integrated reporting in the annual reports found by this study may be because even though integrated reporting in Thailand is still voluntary and not subject to any form of regulation, all the companies in this study already provide integrated reporting to meet societal expectations rather than operating with a narrow focus on financial information reporting (Vilanova, 2007). In addition, corporate integrated reporting may also link to sustainable development and greater long-term performance (Ali, 2015). However, some of the companies sampled in the study did not make full disclosures relating to the six capitals, but choose to provide only some capital reporting based on the higher expectations of society.

Table 2: Extent and pattern of integrated reporting

Capital	2012		2013		2014		2015		Average words	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Finance	88.73	58.51	95.80	76.63	108.50	89.75	125.06	102.33	116.08	76.23
Manufactured	39.08	25.39	44.31	44.28	56.78	40.58	73.88	64.18	59.05	44.49
Intellectual	133.39	127.76	164.53	147.20	197.75	189.85	226.10	210.03	180.44	172.30
Human	50.16	50.64	62.91	61.41	78.33	79.43	90.37	92.83	76.77	73.66
Society	78.41	84.75	110.14	109.89	132.73	122.27	150.87	144.76	129.27	118.19
Environment	23.39	20.87	31.75	29.33	44.90	41.47	52.65	52.88	41.98	34.59
Total IR	426.63		544.29		671.98		771.49		603.59	

To answer the second research question, paired sample t-tests were used in this study (See Table 3). The results indicate that there was a significantly increased level of integrated reporting year by year during the period being studied at the 0.001 level. Moreover, the difference in the level of integrated reporting between 2013 and 2014 (t = 10.044) was higher than the difference between 2012 and 2013 (t = 8.423), and 2014 and 2015 (t = 5.871) most likely because the concept of integrated reporting was launched in Thailand in 2013 by the four biggest auditing firms, Deloitte, PricewaterhouseCoopers, Ernst & Young, and KPMG as the big4 auditors. The big4 auditors promoted the concept of integrated reporting to their clients most of whom are companies listed in the SET, which may help to explain why there was a bigger increase in integrated reporting between 2013 and 2014 than in the preceding and following periods. The finding of increasing levels of integrated reporting is consistent with that of Kuasirikul and Sherer (2004) who found a significant increase in environmental disclosures by SET listed companies between 1993 and 1999 and Suttipun (2015) who also found a significant increase in sustainable development reporting in the annual reports of Thai listed companies between 2002 and 2012. This is because companies disclose information to their stakeholders in order to decrease information asymmetry, optimize financing costs, and improve firm value (Frias-Aceituno et al., 2014). Therefore, increasing corporate integrated reporting can bring benefits to companies.

Table 3: Paired Sample t-tests

Period	Paired different			t	Sig
	Mean	**Std. Deviat.**	**Std. error**		
2012-2013	-117.66	171.089	13.969	-8.423	.000**
2013-2014	-127.69	155.711	12.714	-10.044	.000**
2014-2015	-99.51	207.568	16.948	-5.871	.000**

Note: ** and * denote significant at 99% and 95% confidence level respectively.

Table 4 presents a descriptive analysis based on the means and SDs of all the variables used in this study. As the results show, the average level of integrated reporting in the annual reports of the Thai listed companies studied was 603.59 words. The average percentage of family ownership, government ownership, and institutional ownership were 34.65, 12.75 and 17.10 percent respectively. The average board size was 11.75 people, while the percentage of independent board members was 27.49 percent. To test for multicollinearity between the variables used in this study, table 4 also shows the correlations between the eight variables consisting of one dependent variable, and seven independent variables. By using fixed effect model of panel testing, the variance inflation factors (VIF) of the correlation matrix between the variables was 1.386, which indicates that there was no multicollinearity which would be indicated by a VIF exceeding 10.

Table 4: Correlation Matrix

Variable	***IR***	***FAMOWN***	***GOVOWN***	***INSTITU***	***BSIZE***	***PID***	***DUAL***	***CSRAW***
Mean	603.59	34.65	12.75	17.10	11.75	27.49	0.96	0.76
SD	503.59	19.86	10.48	14.68	2.79	8.86	0.20	0.42
Max	2866	80.63	71.21	96.78	18.00	50.00	1.00	1.00
Min	80	0.00	0.00	0.00	6.00	0.00	0.00	0.00
IR	1	-.200*	.179*	.174*	.337**	-.182*	.117	.292**
FAMOWN		1	-.162*	-.187*	-.191*	.063	-.030	.113
GOVOWN			1	.094	.099	-.004	.054	.390**
INSTITU				1	-.002	.083	.053	.068
BSIZE					1	-.463**	.011	-276**
PID						1	.005	.115
DUAL							1	.048
CSRAW								1

Note: ** and * denote significant at 99% and 95% confidence level respectively.

Multiple regression was used to examine the relationship between corporate governance and the level of integrated reporting in the annual reports of the SET listed companies sampled between 2012 and 2015. The results of the two models used are presented in table 5. The result indicated that within the seven independent variables, there were significant positive relationships between the level of integrated reporting in annual reports and *INSTITU* (at the 0.05 level), *BSIZE* (at the 0.01 level), and CSRAW (at the 0.05 level). However, the study did not find any significant relationship between *FAMOWN, GOVOWN, PID, DUAL,* and the level of integrated reporting at the 0.05 level. Even though the *IR* had a significant correlation with *FAMOWN, GOVOWN, and PID* in Table 4, these three independent variables were dominated by the other independent variables in multiple regression model (Table 5). Therefore, *FAMOWN, GOVOWN, and PID* cannot affect the *IR* at the 0.05 level.

Table 5: Multiple Regression for Model and Robustness Test

Variable	Main model		Robustness test	
	B	**t (sig)**	**B**	**t (sig)**
Constant	1324.702	2.314 (.022*)	1352.820	2.328 (.022*)
FAMOWN	-2.217	-.971 (.334)	-2.126	-.930 (.354)
GOVOWN	2.674	.648 (.518)	3.511	.826 (.410)
INSTITU	6.824	2.095 (.038*)	8.883	2.108 (.041*)
BSIZE	43.238	2.405 (.018*)	41.242	2.114 (.037*)
PID	-4.721	-.874 (.384)	-4.892	-.869 (.387)
DUAL	372.446	1.709 (.090)	354.090	1.663 (.099)
CSRAW	216.731	1.961 (.050*)	232.083	2.035 (.044*)
R Squared	.228		.240	
Adjusted R Squared	.182		.187	
F-value	4.936 (.000**)		4.559 (.000**)	

Note: ** and * denote significant at 99% and 95% confidence level respectively.

In the finding of a relationship between institutional ownership of companies and integrated reporting, the result of this study is consistent with that of El-Gazzar (1998) and the relationship is explained by the fact that the institutions are owned by various groups of owner, therefore, the institutions mush cautiously supervise all of their investments including listed companies from the Stock Exchange of Thailand where they invested. The pressure of institutions' supervision can make the companies provide much information including the level of integrated reporting in order to reduce the agency problems. In terms of the relationship between *BSIZE* and *IR*, the study's results were also similar to those of Ahmed and Ghazali (2013), Abeysekera (2010), and Cerbioni and Parbonetti (2007) in the finding of a relationship between board size and the level of integrated reporting. This is because a larger board size tends to increase both the amount and the variety of disclosures of information based on social expectations about the availability of information relating to corporate decision making (Abeysekera, 2010). The larger committee is also able to improve the monitoring of corporate actions and activities in the interests of society (Dalton and Dalton, 2005). To demonstrate the mixed results of prior related studies (Suttipun, 2014; Raar, 2002), this study found a positive relationship between CSR awards and the level of integrated reporting which is consistent with the prior studies of Suttipun (2014) and Deegan and Gordon (1998). Therefore, the CSR award in Thailand can be used to promote sustainable development by companies listed in the SET (Suttipun, 2014) and to gain a CSR award, listed companies have to engage in a variety of sustainable development activities and actions including integrated reporting. The CSR award winners would be more likely to attempt to meet societal expectations for information disclosure through sustainability reporting (Deegan and Gordon, 1998).

On the other hand, the study found no relationship between the level of integrated reporting and other variables relating to ownership structure and board composition. Specifically, *PID, and DUAL* lacked any significant association with the level of integrated reporting and this result is consistent with the findings of Taliyang and Jusop (2011) who detected no significant relationship between independent board members, and CEO duality and the voluntary reporting practices of Malaysian listed companies. These results may be due to a lack of regulations requiring reporting in developing countries so that there is no pressure on independent board member and CEO's to make voluntary reports including integrated reporting. This study also failed to find a significant relationship between *FAMOWN*, *GOVOWN* and the level of integrated reporting, which is similar to Suttipun (2012) who found no correlation between family and government ownership and triple bottom line reporting. This might be because the integrated reporting is still voluntary in Thailand, therefore, both types of ownership structure (*FAMOWN*, and *GOVOWN*) could possibly be reluctant to disclose this types of information.

To test the robustness by using the multiple regression without financial companies, the study found the same result with the main model that already included companies from financial industry.

6. CONCLUDING REMAEKS AND RECOMMENDATIONS

From three main objectives, the results of this study indicate that the 150 companies sampled provided an average of 603.59 words of integrated reporting in their annual reports during period being studied. Within the six categories of capital reporting, intellectual capital reporting was the most commonly reported category while environmental capital reporting was the least common category of integrated reporting. There were significant increases in the level of integrated reporting in the annual reports during the period 2012 to 2015 in all three period of annual periods (2012-2013, 2013-2014, and 2014-2015). There was a significant positive relationship between the level of integrated reporting and each of institution-owned firms, board size, and companies who had been given CSR awards. However, the study found no significant correlation between the level of integrated reporting and any of, family owned companies, government owned companies, the proportion of independent members of boards of directors or CEO duality. The results due to non-relationship between the corporate governance and the level of integrated reporting may be related to a lack of regulations requiring reporting in developing countries so that there is no pressure on CEO duality and independent board members to make voluntary reports including integrated reporting. Moreover, social expectation and stakeholder demand in Thailand have the same expectations on the integrated reporting of government-owned companies as those they have for privately owned companies as same as in between family-owned companies and non-family-owned companies.

The results of this study provide some contributions to existing knowledge relating to reporting practices. Firstly, this is the first study examining the relationship between corporate governance and integrated reporting by listed companies in the Thai context. There have been no previous studies of the extent, pattern, and level of integrated reporting in developing country, and most evidence on integrated reporting has been derived from empirical studies in developed countries such as Australia, New Zealand, Japan, South Africa, and European countries. The theories used in this study can be used to explain the reason of empirical findings. Furthermore, the study provides knowledge to regulatory bodies such as the SET and the Federation of Accounting Professions who regulate the disclosure of information by all the companies listed in the SET
However, the study entails certain limitations. First, this study used corporate annual reports as the medium through which to quantify integrated reporting, although there are other mediums used by listed companies to communicate with their stakeholders, such as websites, stand-alone reports and corporate letters. Second, the period of four years studied might be regarded as being too short to constitute a longitudinal study, the typical length of which would be around five to ten years. Finally, the study selected only six proxies for corporate governance in terms of ownership structure and board composition, but there are other corporate governance proxies available to

represent ownership structure and board composition. Therefore, a future study might cover a longer period of up to ten years and also consider other common mediums such as corporate websites or stand-alone reports as well as considering the effect of other proxies for corporate governance.

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