รายงานวิจัยฉบับสมบูรณ์

โครงการ An Investigation of Integrated Reporting: An Evidence of Thai Listed Companies

โดย อ.ดร.มัทนชัย สุทธิพันธุ์

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สนับสนุนโดยสำนักงานกองทุนสนับสนุนการวิจัย

Abstract

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Project Title: An Investigation of Integrated Reporting: an Evidence of Thai Listed Companies
(ชื่อโครงการ)

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(ระยะเวลาโครงการ)

Abstract:

This study aims to investigate the narrative extent, nature, and level of integrated reporting in annual reports of Thai listed corporate in the Stock Exchange of Thailand during 2012 to 2015, study the changes/pattern of the integrated reporting in annual reports of Thai listed company during period being study, and to examine the relationship between corporate governance, integrated reporting, and financial performance.

Population of this study is drawn from all companies listed in the Stock Exchange of Thailand that there are over 500 firms. By simple random sampling, 150 firms are used as a sample in this study. Corporate annual reports during 2012 to 2015 from companies listed in SET are used to study the theme, extent, nature, and level of integrated reporting of Thai listed companies. Content analysis by word counting will be used as the study method to investigate and quantify the level of integrated reporting. Descriptive analysis, independent sample t-test, paired sample t-test, correlation matrix, and multiple regression are used to analyse in this study

The findings indicate that the companies provide an average of 603.59 words of integrated reporting in their annual reports during the period being studied. Within the six categories of capital falling within the scope of integrated reporting, intellectual capital reporting

is the most commonly reported category, while environmental capital reporting is the least commonly reported category. There are significantly increased levels of integrated reporting between 2012 and 2015 with significant increases in all four annual periods studied (2012-2013, 2013-2014, and 2014- 2015). There are significant positive relationships between the level of integrated reporting and each of, institution-owned firms, board size and companies given CSR awards. On another hand, there is no significantly relationship between the level of integrated reporting and corporate financial performance.

The limitations of this study include the subjectivity of the data collection method, the dependence on annual reports as the only credible source of data, the period being studied, and type of research information. However, this study appears to be the first to investigate corporate governance influencing the integrated reporting in Thai corporate annual reports, and to assess whether the key events in a developing country increase the integrated reporting.

Keywords: Integrated reporting, annual report, the Stock Exchange of Thailand

บทคัดย่อ

Project Code: MRG5880263
(รหัสโครงการ)

Project Title: การศึกษาการรายงานตามหลักไตรกัปปิยะในรายงานประจำปีของบริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย
(ชื่อโครงการ)

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(ระยะเวลาโครงการ)

บทคัดย่อ:

วัตถุประสงค์ในการศึกษาครั้งนี้คือการศึกษาขอบเขต ลักษณะ และปริมาณการรายงานแบบบูรณาการณ์ในรายงานประจำปีของบริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยในช่วงปี พ.ศ. 2555 ถึงปี พ.ศ. 2558 และศึกษาแนวโน้มการเปลี่ยนแปลงของปริมาณการรายงานแบบบูรณาการณ์ในรายงานประจำปี รวมทั้งทดสอบความสัมพันธ์ระหว่างการกำกับดูแลกิจการ ปริมาณการรายงานแบบบูรณาการณ์ในรายงานประจำปี และผลการดำเนินงานที่เป็นตัวเงิน

ประชากรที่ใช้ในการศึกษาครั้งนี้ คือ บริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย กลุ่มตัวอย่างจำนวน 150 บริษัทถูกเลือกมาจากการสุ่มตัวอย่างแบบง่าย การศึกษาครั้งนี้เก็บข้อมูลจากรายงานประจำปีในช่วงปี พ.ศ. 2555 ถึงปี พ.ศ. 2558 การวิเคราะห์ข้อมูลประกอบด้วย การวิเคราะห์เชิงพรรณนา การทดสอบความแตกต่าง และการทดสอบความสัมพันธ์แบบหลายตัวแปร

ผลการศึกษาพบว่าการรายงานแบบบูรณาการณ์ในรายงานประจำปี ระหว่างปี พ.ศ. 2555 ถึง 2558 มีปริมาณเฉลี่ยเท่ากับ 603.59 คำ เมื่อแยกการรายงานแบบบูรณาการณ์ในรายงานประจำปีตามทุน จำนวน 6 ประเภท พบว่า บริษัทมีการการรายงานแบบบูรณาการณ์ในรายงานประจำปีเกี่ยวกับทุนทางปัญญามากที่สุด แต่มีการรายงานทุนด้านสิ่งแวดล้อมน้อยที่สุดในรายงานประจำปี ระดับการรายงาน

แบบบูรณาการณ์ในรายงานประจำปีมีเพิ่มขึ้นตั้งแต่ ปี พ.ศ. 2555 ถึงปี พ.ศ. 2558 การศึกษาพบความแตกต่างในปริมาณการรายงานแบบบูรณาการณ์ในรายงานประจำปีระหว่างกลุ่มของ ขนาดกิจการ บริษัทที่ได้รับรางวัลความรับผิดชอบต่อสังคม การศึกษายังพบว่าเหตุการณ์ในปี พ.ศ. 2555 และปี พ.ศ. 2558 มีปริมาณในการเพิ่มขึ้นของปริมาณการรายงานแบบบูรณาการณ์ในรายงานประจำปี นอกจากนี้ การศึกษายังพบความสัมพันธ์ระหว่าง การถือหุ้นโดยสถาบัน ขนาดของคณะกรรมการ รางวัลความรับผิดชอบต่อสังคม และปริมาณการรายงานตามหลักไตยกัปปิยะ แต่ไม่พบความสัมพันธ์ระหว่างปริมาณการรายงานแบบบูรณาการณ์ในรายงานประจำปีและผลการดำเนินงานทางการเงิน

ข้อจำกัดของการศึกษาครั้งนี้มาจากเครื่องมือในการเก็บข้อมูล สื่อที่ใช้ในการศึกษา ช่วงระยะเวลาการศึกษา และลักษณะของข้อมูลวิจัย อย่างไรก็ตามการศึกษาครั้งนี้ถือเป็นการศึกษาอิทธิพลของลักษณะธุรกิจกับการรายงานแบบบูรณาการณ์ในรายงานประจำปีครั้งแรกในประเทศไทย

คำสำคัญ: การรายงานแบบบูรณาการณ์ รายงานประจำปี และตลาดหลักทรัพย์แห่งประเทศไทย

Executive Summary

Integrated Reporting is the combined reporting of financial and non-financial information and was launched by the International Integrated Reporting Committee (IIRC) in 2010. Integrated reporting works as a corporate management tool and combines traditional financial reporting with sustainability (non-financial) performance. 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. 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. Nowadays, some leading companies have adopted integrated reporting as their preferred manner of reporting their performance using a single report.

However, the integrated reporting is a fairly new reporting framework, but 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. Most companies 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, European countries, Australia, and New Zealand. 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 not as well established as it is in more developed economies. 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. Further, there have been no longitudinal studies of integrated reporting and there is, therefore, a lack of knowledge about the pattern of reporting. Moreover, there has been no study of the relationship between corporate governance and integrated reporting. Therefore, this study aimed to fill this lacuna in the reporting literature.

Therefore, the main objective of this study aim (1) to study extent, nature, and level of integrated reporting in annual reports of Thai listed corporate in the Stock Exchange of Thailand during 2012 to 2015, (2) to investigate the changes/pattern of the integrated reporting in annual reports of Thai listed company during period being study, and (3) to test the relationship between corporate governance, integrated reporting, and financial performance.

Population of this study is drawn from all companies listed in the Stock Exchange of Thailand that there are over 500 firms. By simple random sampling, 150 firms are used as a sample in this study. Corporate annual reports during 2012 to 2015 from companies listed in SET are used to study the theme, extent, nature, and level of integrated reporting of Thai listed companies. Content analysis by word counting will be used as the study method to investigate and quantify the level of integrated reporting. Descriptive analysis, independent sample t-test, paired sample t-test, correlation matrix, and multiple regression are used to analyse in this study. Moreover, the researcher will take the company that provides an accounting period at 31th December as the end of period because it is easy to be compared each other.

As the results following by objective, the study finds that 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). Moreover, 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).

To test the relationship between corporate governance, integrated reporting, and financial performance, there are significant positive relationships between the level of integrated reporting and each of, institution-owned firms, board size and companies given CSR awards. On another hand, there is no significantly relationship between the level of integrated reporting and corporate financial performance.

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 findings of this study are able to support legitimacy theory and signaling theory in that even though integrated reporting is still voluntary by listed companies in Thailand, societal expectations can force companies to incorporate integrated reporting into their annual reports. The study's results also support agency theory in that the reason for the relationship between corporate governance and integrated reporting is in part a result of measures adopted to reduce information asymmetry and conflicts of interest between owners and their managements. 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

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. Third, the study collected only the quantity of integrated reporting, but did not consider the quality of the reporting. Therefore, there is no guarantee that the greater level of integrated reporting undertaken by Thai listed companies can be classified as constituting better

reporting by those companies. 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. Finally the quality of integrated reporting should also be considered in a future study.

Content

Output จากโครงการวิจัยที่ได้รับทุนจาก สกว.

1. **Publications** (Under reviewing process)**:**
   1.1 Suttipun, M. (201X). The reason of Triple Bottom Line reporting in Thailand. ***Pacific Accounting Review.***
   1.2 Suttipun, M. (201X). The association between board composition and intellectual capital disclosure: empirical evidence from Thailand. ***Asian Journal of Business and Accounting.***
   1.3 Suttipun, M. and Bomlai, A. (201X). The first step towards integrated reporting in Thailand. ***International Journal of Disclosure and Governance.***
   1.4 Suttipun, M. (201X). An effect of integrated reporting on corporate financial performance: an evidence of Thailand**.** ***Corporate Ownership and Control.***

2. **Conference:**
   2.1 Suttipun, M. (2016). ***Association between board composition and intellectual capital disclosure: empirical evidence from Thailand***, Presented at the 12th Asia-Pacific Management Accounting Association (APMAA) 2016 Annual Conference in the Sherwood Taipei, Taipei, Taiwan.

Chapter 1:

Introduction

1.1 Introduction

A perspective of corporation in today's world is broader than economies with the notion that extends into societal and environmental. By globalization and growing non-financial regulation, the corporation has to take responsibility to its financial, non-financial, governance, and other crises including corporate transparency and accountability, actual and prospective resource scarcity, population growth, and environmental concerns. Information reporting and disclosure are included into corporate actions and activities. The reporting contained in financial and non-financial reports has tended to be presented quite separately from that in the others, and this may lead to confusion among corporate stakeholders. Moreover, traditional financial annual reports and non-financial reports (i.e. corporate social responsibility reports, environmental reports, and sustainable development reports) were retrospective and did not present the future targets and crucial risks that might become relevant in the future. Corporate traditional annual reports and standalone non-financial reports also fail to connect social, environmental, and governance issues to corporate core business strategy and financial performance. Therefore, combination of both reporting would raise the awareness of a long-term sustainable development view, increase the comparability of global corporations, and reduce corporate reputational risk.

Integrated Reporting (IR) is a combination reporting between financial and non-financial information launched by the International Integrated Reporting Committee (IIRC) since 2010. The IR has worked as corporate management tool to combine traditional financial and sustainability (non-financial) performance. The IR is used to codify corporate financial and non-financial information quite logical. The outlines of the IR are included strategic focus, connectivity of information, future orientation, responsiveness and stakeholders, and governance and remuneration. Moreover, the idea of IR has applies equally to the small and medium enterprises, public sectors, and non-profit organizations. The IR also provides the broader explanation of corporate performance than the traditional approach such as the traditional annual report. In today's world, some leading companies have started to report their performance using a single report under the name of the IR (Frias-Aceituno et al. 2014). This is because the IR can reduce the agency costs between agents and principles, and the problem of information asymmetry.

However, since the IR has launched from 2010, although the relevance of the IR has been increased rapidly (See GRI, 2011; Elkington and Renaut, 2010), it is unclear why corporations adopt it into their reporting. Moreover, although important initiatives are being taken, the IR is currently produced by just few companies at the vanguard of the process (Frias-Aceituno et al. 2014). There are also too many guidelines of the IR framework so corporations may follow the guideline rather than looking for themselves. The IR framework will push corporations out of their comfort zone by forcing discussions away from what is

known and real. Compared with financial information reporting, systems for non-financial information reporting (such as social, environmental, and governance) are still less developed and unknown. This is because Verrecchia (1983) found that less information disclosures will take place in competitive advantage because information reporting could harm the competitive position of the firms. Harris (1998) also stated that companies in monopoly positions have higher costs and wish to protect the abnormal profits derived from their position by reporting less information. But that idea is totally different with Birt et al. (2006) who found that there was a positive relation between competition and the segment information disclosures. Therefore, providing more information by companies can reduce agency costs, reduce information asymmetries, and increase the competitive advantage. There is very little published scholarly work focused on an empirical analysis of the content and form of IR. Those prior studies of the IR are indicated only in developed countries such as USA, Australia, New Zealand, South Africa, and the European countries, but none is in emerging countries including Thailand where do not have the same degree of sustainability and regulation as well as developed markets. Moreover, the IR in the early stages is more on soft (general) measures, but less for hard (specific) measures.

Therefore, this study aims to investigate the changes of the IR in annual reports of Thai listed company during 2011 and 2015, to test the relationship between corporate characteristics, integrated reporting, and financial performance. To answer the research questions, there are three main questions used in this study; what is extent, nature, and level of IR in Thai listed corporate annual reports? What is pattern of the level of IR in annual reports during 2011 and 2014? And are there the relationships between corporate characteristics, integrated reporting, and financial performance?

1.2 Research questions

There are three main research questions in this study that are:

1.2.1 What is extent, nature, and level of IR in Thai listed corporate annual reports?

1.2.2 What is pattern of the level of IR in annual reports during 2012 and 2015? and

1.2.3 Are there the relationships between corporate governance, integrated reporting, and financial performance?

1.3 Research objectives

There are three main objectives in this study that are:

1.3.1 To study extent, nature, and level of IR in Thai listed corporate annual reports.

1.3.2 To investigate the changes of the IR in annual reports of Thai listed company during 2012 and 2015.

1.3.3 To test the relationship between corporate governance, integrated reporting, and financial performance.

1.4 Expected contributions

The study provided some contributes expected to the literature relating to integrated reporting in the following ways. Firstly, the study will enhance understanding of the relationship between corporate characteristics, integrated reporting and financial performance particularly in developing country. Secondly, this study will expand information about integrated reporting in developing countries to scholars, and researchers as well as developed countries. It also contributes useful knowledge to investors, shareholders, and creditors who consider integrated reporting when making investment decisions. The study may lead to improvements in the working of Thai integrated reporting regulations with benefits for people, the planet, and profits. This study will also contribute legal and management scholarship by determining the impact that integrated reporting has on corporate financial performance, and finally the study may motivate Thai listed companies to provide integrated reporting in their annual reports. The study will provide useful insights into the future direction and impact of the IR as well as potential costs and benefits of the IR.

1.5 Outline of the study

This study aims to study extent, nature, and level of IR in Thai listed corporate annual reports, to investigate the changes of the IR in annual reports of Thai listed company during 2012 and 2015, and to test the relationship between corporate governance, integrated reporting, and financial performance. The population in this study is all the companies listed on the SET. Using a simple random sampling, 150 companies listed on the SET are chosen as the sample in this study. The sources of the integrated reporting information are the 2012 to 2015 annual integrated reports of the companies selected. Finally, data is analyzed by descriptive analysis, independent sample *t*-tests, correlation analysis, and path analysis.

1.6 Definition of keywords

Integrated reporting is the reporting that integrates economic, social, and environmental information (financial and non-financial information) into one report for corporate stakeholders in the concise, clearly expressed, consistent, and comparable format (Eccles and Krzus, 2010).

Annual integrated report is the corporate report providing for its stakeholders such as shareholders, creditors, investors, regulators, and standard setters. The report consists or financial and non-financial information (Thailand Federation of Accounting Professions, 2015).

The Stock Exchange of Thailand (SET) is the stock market of Thailand. The listed companies in the SET are separated within eight industries: agriculture and food; consumer product; financial; industrial; property and construction; natural resource; service; and technology (SET, 2011).

Chapter 2:

Literature Review

2.1 Introduction:

In this chapter, integrated reporting, financial performance will be explained by history, definition, objective, and advantage and disadvantage of reporting. Agency and stakeholder theories are described in the section of theoretical perspective following by literature review. Scope of this study including frame work of study will be shown in the last section.

- Integrated reporting
- Financial performance
- Theoretical perspective
- Literature review
- Scope of this study

2.2 Integrated reporting:

The IR forms the latest part of an evolution of corporate reporting that has bought on earlier development which extended the provision of information to corporate stakeholders (Eccles and Krzus, 2011). Prior initiatives in reporting focused on providing a broader range of non-financial information than providing traditional financial reports to only shareholders and investors, and included the production of Triple Bottom Line (TBL), corporate social responsibility (CSR), sufficiency economy philosophy (SEP), sustainable development (SD), and social and environmental accounting (SEA) (Suttipun, 2014). Such reports have been produced by an increasing number of corporations since 1980's (KPMG, 2011). This survey had provided insights into national, international, and industry trends in social and environmental reporting among large corporate since 1993.

But, although the literatures on Triple Bottom Line (TBL), corporate social responsibility (CSR), sufficiency economy philosophy (SEP), sustainable development (SD), and social and environmental accounting (SEA) disclosures were shown that there was increasing number of companies around the world providing non-financial information on their reports, the growth in terms of quantity of disclosures does not correlate higher standards of quality in the information provided to their stakeholders. For example, in the context of a lake of regulation, there is strong motivation for the corporations to utilize such reporting for legitimizing strategies, and reputation management (Gray and Milne, 2002). The literatures had developed emphasizing the inadequacies of the most existing non-financial information disclosures, and they were suggested that the reporting has failed into its purpose

of providing useful information to stakeholders that drive improved corporate social and environmental behavior (Bebbington and Gray, 2001; Gray and Milne, 2002).

The development of IR was given impetus by the global financial crisis and driven by perceived needs for an improved method of reporting that incorporates a range of financial and non-financial information necessary for effective decision-making and risk management in the current business, and financial environment (Abeysekera, 2012). There is also a growing awareness on the part of both corporates and investors of the interconnectedness between financial stability and environmental and social sustainability, the needs for greater integration between financial and non-financial information, and present and future-oriented data in reporting to their stakeholders.

The IR is defined as a concise communication about how a corporate strategy, governance, performance, and prospects lead to the creation of value over the short, medium, and long terms. The IR will integrate economic, social, and environmental information into one report for corporate stakeholders in the concise, clearly expresses, consistent, and comparable format (Eccles and Krzus, 2010). Ernst and Young (2012) describes that the IR is the report providing context to financial and non-financial information and goals. The IR connects strategies with corporate commitment to the long-term stewardship of material economic, social, and environmental issues.

The IR has been developed by the International Integrated Reporting Council (IIRC) which was formed since 2010 from the Global Reporting Initiative (GRI) and the Prince of Wales Accounting for Sustainability Project. Committees of IIRC are consisted of regulators, corporations, investors, shareholders, standard setters, the accounting professions, and NGOs. The main aim of IR is to create the corporate reporting in financial information, non-financial information, and goals including setting the framework and guideline for IR.

In 2012, the IIRC re-launched the International IR Framework Outline including the Prototype of the International Framework in 2013. The Prototype of the International Framework has set out definition of key concepts and principles which are intended to underpin the content and description of the IR. The IIRC announced its intention to publish the first version of IR framework (1.0) in 2013.

In the IR, there are five guiding principles for IR structure, six content elements, and six corporate capitals. The guiding principles of IR structure are consisted by strategic focus, information connectivity, future orientation, responsiveness and stakeholder inclusiveness, and conciseness, reliability, and materiality. In the six content elements, there are organizational overview and business model, operating context including risks and opportunities, strategic objectives and strategies to achieve those objectives, governance and remuneration, performance, and future outlook. For the corporate capitals, the IR will not display only financial capital, but also manufactured, human, intellectual, natural, and social and relationship capitals either.

The benefits of corporations having the IR are included that facilitate in seeking new business opportunities, safeguard corporate reputation, maximize competitive advantage, and mitigate operational risk (Phillips et al., 2011).

2.3 Financial performance:

Financial performance is a corporate management results following by its goals and objectives providing in the number and percentage of income, cost, expense, profit, and loss. The financial performance is a corporate financial measurement tool which the corporation has to provide it under the regulation of country and accounting standards. The financial performance is used by several types of users (stakeholders) such as shareholders, investors, creditors, suppliers, and employees for any decision making.

Financial performance can be used for financial analysis whether the corporation is in a good position or not. Financial analysis can result many factors: liquidity, profitability, solvency, and firm value.

There are so many measurement tools from prior related studies to indicate whether the company is either good or bad corporate financial performance such as return on total asset (ROA), return on equity (ROE), and Tobin's Q. However, this study will pick up the return on total asset as the proxy of corporate financial performance.

2.4 Theoretical perspectives:

Although the previous related studies used some theories to explain the IR such as political costs, proprietary costs, and institutional theories, this study picks up three main theories consisting of agency, stakeholder, and signaling theories to explain the objectives of study: to study extent, nature, and level of IR in Thai listed corporate annual reports; to investigate the changes of the IR in annual reports of Thai listed company during 2011 and 2015; and to test the relationship between corporate characteristics, integrated reporting, and financial performance.

In agency theory, a corporation faces the problems about conflict of interest between agents (top managements) and principles (owners) such as higher agency costs, and information asymmetry. To reduce the agency costs, Birt et al. (2006) and Frias-Aceituno et al. (2014) found that the corporation has to be interested in publishing greater volumes of information. Disclosing more information also reduce the problem of information asymmetry. Therefore, agency theory can explain why company will provide the IR in its annual report including the extent, nature, and level of disclosures.

According to signaling theory, information disclosures are the signals conveyed to the market in order to reduce information asymmetry, optimize financing costs, and increase the value of the corporation (Frias-Aceituno et al., 2014). Moreover, these effects would

contribute positively to economic growth, job creation, and quality of life, as the lower cost of capital would enable the company to raise its level of investment (Elliott and Jacobson, 1994). Therefore, the signaling theory is used to explain the change of IR during the period being study.

According to stakeholder theory, company will provide its activities and actions serving its stakeholder demands. Even though the power of stakeholders in each group is different, the company will not response only financial stakeholders such as investors, creditors, and shareholders, but also the other stakeholders either such as employees, customers, society and community, environmental lobby, and regulators. Therefore, different companies within different corporate characteristics such as size of company, industry type, auditing type, ownership status, and business type will provide totally different IR in terms of extent and level of disclosures because they have different type and number of their stakeholders. The stakeholder theory is used to explain the relationship between corporate characteristics and the level of IR.

The concept of IR reporting in Thailand is supported by the stakeholder theory because the corporate existences are depended on their stakeholder demands. Each group of stakeholder has right to receive information from the companies, even though the stakeholders might not use the information, nor have direct influence on the firms (Gray et al., 1998). Different types of stakeholder have different power to compel and affect corporate actions and activities, and the companies need to continually adapt their operating and reporting behaviors (Islam and Deegan, 2010). In addition, the companies also need to maintain the relationship with their stakeholders by frequently providing information such as IR reporting in annual reports.

According to Fauzi et al. (2007), stakeholders can be classified into two categories: primary and secondary. Primary stakeholders such as customers, suppliers, employees and investors are directly affected by every decision made by the company. On the other hand, secondary stakeholders may be either directly or indirectly affected by the company's decisions. These stakeholders include business groups, local communities, the media, social activist groups, and foreign and local governments.

To adopt the IR reporting, the companies are required to focus on both financial and non-financial information as the long-term performance rather than only financial information as the short-term performance (Ref). Moreover, corporate long-term performance under the TBL reporting is based on the notion that all stakeholders demands are tended to. Therefore, the needs of stakeholder would be met with the TBL reporting practice. When the companies can satisfy the information demands of their stakeholder, they would benefit to have better financial performance (Nasi et al. 1997). Therefore, this theory can explain the reasons of corporation provide the IR reporting in annual reports.

2.5 Literature review:

There are some prior related literatures about the relationship between corporate characteristic, the integrated reporting (or both financial and non-financial information

disclosures such as sustainable development reporting, triple bottom-line reporting, and sufficiency economy philosophy reporting), and corporate financial performance.

Frias-Aceituno et al. (2014) tested the corporate characteristics influencing the integrated sustainability and financial reporting of 1590 international companies around the world during 2008 to 2010. Logistic regression and panel data analysis are used to analyze the data of their study. By using agency theory, signaling theory, political costs theory, and proprietary costs theory, their study finds that there is the negative impact of industry type on the development of IR. However, the IR is not influenced by the other corporate characteristics consisting of size of company, business type, profitability, and corporate growth.

Suttipun (2014) tested the relationship between corporate characteristics, corporate social responsibility reporting, and financial performance of 220 listed companies in the Stock Exchange of Thailand by using annual reporting during 2011 to 2012. Agency theory, stakeholder theory, and legitimacy theory are used to explain the relationship of the study. Using path analysis, paired and independent sample t-test, the study finds that there is a positive relationship between auditing type, corporate social responsibility award, and corporate social responsibility reporting. Moreover, corporate financial performance is affected by type of industry and corporate social responsibility reporting.

Aggarwal (2013) studied the effect of sustainability reporting on financial performance by using 20 Indian listed corporate annual reports during 2011 to 2012. Multiple regression, ANOVA, and independent sample t-test are used to analyze the data of the study. The study finds that the sustainable development reporting in terms of society and corporate governance has positively influenced financial performance. On another hand, there is a negative relationship between employee disclosures and corporate performance. But, no relationship is between environmental issue and corporate financial performance.

Ameer and Othman (2012) investigate the relationship between sustainability disclosures and financial performance of 100 leading companies in developing countries by using their websites during 2006 to 2010. Content analysis is used to quantify the level of sustainability reporting using GRI version 4.0. As the results, there is a positive relationship between social and ethical disclosures and financial performance. But, on another hand, there is a negative relationship between environmental disclosures and corporate financial performance.

Saleh et al. (2011) study the relationship between corporate social responsibility reporting and financial performance of 200 Malaysian largest companies during 1999 to 2005. Corporate social responsibility reporting is separated within four issues: employee; social; product; and environmental. By collecting from annual reports, the study uses descriptive analysis and multiple regression to analyze the data. The results find that social disclosures have positively affected the corporate financial performance, while there is a negative relationship between environmental and product disclosures and corporate financial performance.

Wild and Van Staden (2014) investigate the extent and nature of IR, and test for a relationship between corporate characteristics consisting of size, industry, profitability, country, and auditor, and the level of IR of 58 companies from the database of the IIRC in 2013. They finds that most companies address financial, human, natural, and social capitals in their annual reports, while manufactured, and intellectual capital are not well addressed. The results indicate that there is a negative relationship between type of industry and the level of IR, but not for the other corporate factors.

Jensen and Berg (2012) compare the qualitative characteristics of companies that produce either traditional sustainable development reporting or the IR, and test for the relationship between national institutional framework factors (i.e. political system, financial system, education and labor system, cultural system, and economic system, and the reporting on sustainable development and the IR. Using 309 world leading companies, the results show that there are different disclosures between sustainability reporting and the IR. Moreover, investor and employment protection laws, the intensity of market orientation and ownership concentration, the level of economic, the degree of national corporate responsibility, and the value of the country of origin have affected to the IR.

From prior studies earlier, however, since the IR has launched from 2010, although the relevance of the IR has been increased rapidly (See GRI, 2011; Elkington and Renaut, 2010), it is unclear why corporations adopt it into their reporting. Moreover, although important initiatives are being taken, the IR is currently produced by just few companies at the vanguard of the process (Frias-Aceituno et al. 2014). There are also too many guidelines of the IR framework so corporations may follow the guideline rather than looking for themselves. The IR framework will push corporations out of their comfort zone by forcing discussions away from what is known and real. Compared with financial information reporting, systems for non-financial information reporting (such as social, environmental, and governance) are still less developed and unknown. This is because Verrecchia (1983) found that less information disclosures will take place in competitive advantage because information reporting could harm the competitive position of the firms. Harris (1998) also stated that companies in monopoly positions have higher costs and wish to protect the abnormal profits derived from their position by reporting less information. But that idea is totally different with Birt et al. (2006) who found that there was a positive relation between competition and the segment information disclosures. Therefore, providing more information by companies can reduce agency costs, reduce information asymmetries, and increase the competitive advantage. There is very little published scholarly work focused on an empirical analysis of the content and form of IR. Those prior studies of the IR are indicated only in developed countries such as USA, Australia, New Zealand, South Africa, and the European countries, but none is in emerging countries including Thailand where do not have the same degree of sustainability and regulation as well as developed markets. Moreover, the IR in the early stages is more on soft (general) measures, but less for hard (specific) measures.

2.6 Scope of the research:

This study's objectives are to investigate the changes of the IR in annual reports of Thai listed company during 2012 and 2015, to test the relationship between corporate governance, integrated reporting, and financial performance. All is indicated in the framework of this study.

Figure 2.1: Framework of this study

Chapter 3:

Methods

3.1 Introduction

In the study of relationship between corporate governance, the integrated reporting, and financial performance, there are five sections in this chapter consisting of hypothesis development, population, sampling, and samples of study, data collection, instrument of study, and data analysis.

3.2 Hypothesis development

There are three main parts of prior researches and hypotheses; relationships between corporate governance and integrated reporting, integrated reporting and financial performance, and control variables and integrated reporting.

3.2.1 Relationship between corporate governance and integrated reporting

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 (Haji and Ghazali, 2013). Moreover, in a family-owned business, there is no problem about conflicts of interest between the principles and agents because they come from the same family. Previous literature, therefore, indicates 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; Haji 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. 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), and Tagesson *et al.* (2009) 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) and Secci (2005) 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: Government-owned companies are more likely to provide integrated reporting than privately owned companies.

El-Gazzar (1998) found that a higher proportion of institutional ownership of companies positively affected the level of corporate information reporting. This is because institutions play an important role as stakeholders, as shareholders, investors, creditors, as well as through society and the community. Therefore, companies need to fulfill the expectations placed on them including financial and non-financial information reporting. 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. .

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 (Haji and Ghazali, 2013; Abeysekera, 2010; Cerbioni and Parbonetti, 2007). Based on legitimacy theory, a larger board tends to increase both the amount and the variety of societal expectations for information about corporate decision making (Abeysekera, 2010). A larger board is also able to improve the monitoring of corporate actions and activities in the interests of society (Dalton and Dalton, 2005 because both financial and non-financial information reporting can reduce the agency costs between owners and top-management and thereby raise the likelihood of the board opting for the practice of integrated reporting. 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), Haji 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). On the other hand, 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 plays an influencing role in decisions to make both financial and non-financial information disclosures to fulfill a monitoring function (Haji & 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.

3.2.2 Relationship between integrated reporting and financial performance

Although there has been more than 30 years of research and more than 100 empirical studies on the issue of the relationship between voluntary reporting including integrated reporting and financial performance, the findings have been mixed (Garcia-Castro et al., 2010). In a review of 127 previous studies, Morgolis and Walsh (2003) finds that 109 studies treated voluntary reporting as an independent variable in order to investigate if it is predictive of company’s financial performance. They find that 54 studies indicate a significant positive relationship, 27 studies show a significant negative relationship, and 28 studies reveale a non-

significant relationship either way. Therefore, there have been three quite different results in studies seeking a relationship between voluntary reporting and corporate financial performance; a positive relationship, a negative relationship, and no relationship at all.

In support of the first position, Porter and Kramer (2006) find that companies which can reduce social and environmental problems such as natural pollution may be able to increase their productivity, and improve their reputation, and competitive advantage. Moreover, agency theory can explain that integrated reporting can close the conflict between corporate owners and managers by increasing their financial performance. Therefore, companies may earn profits which more than offset the cost of integrated disclosures. For example, in a study of 121 Japanese companies listed on the Tokyo Stock Exchange, Osaka Securities Exchange, and Nagoya Stock Exchange between 2002 and 2003, Nakao et al. (2007) find that environmental performance has positively influenced financial performance. Konar and Cohen (2001) also find that corporate environmental performance has a positive impact on financial performance.

According to agency theory, top managements use the external information for personal advantage, such as ensuring the stability of their position, and increasing their level of remuneration.

From the perspective of signaling theory, profitability could be considered as an indicator of the quality of investment when high returns are obtained, there is a greater incentive to report information, and thus reduce the risk of attracting adverse opinion in the market. The companies would publish any information in order to distinguish themselves from less successful ones, to raise capital at the lowest possible cost, and to prevent a reduction in their share price.

Conversely, however, Connelly and Limpaphayom (2004) note that corporations are likely to view integrated reporting as a cost acting to reduce corporate profits and that companies will provide as little integrated reporting as possible to meet the minimum legal requirement. Therefore, there would tend to be a negative relationship between integrated reporting and corporate financial performance. For example, Wright and Ferris (1997) find a negative relationship between voluntary reporting and the financial performance of South African corporations between 1987 and 1990.

Finally, some studies have found that there is no significant relationship between voluntary reporting and corporate financial performance in developing countries. For example, Rahman et al. (2010) do not find any relationship between environmental reporting and company's financial performance among 108 companies listed in Thailand, Malaysia, and Singapore. Aras et al. (2009) also test for a relationship between corporate social responsibility reporting and corporate financial performance among 100 companies listed on the Istanbul Stock Exchange between 2005 and 2007. However, they do not find any significant relationship. However, the present study hypothesizes that:

H7: There is a relationship between the level of integrated reporting, and financial performance.

3.2.3 Relationship between control variable and integrated reporting

In Thailand, to support the larger number of companies listed in the SET who 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:

H8: There is a positive relationship between CSR awards and integrated reporting.

3.3 Population and samples

Methods of this study are separated into three parts that consist of data and sample selection, dependent and independent variables used in the study, and data analysis including the equations used for study. Firstly, the population in this study is all the companies listed on the SET. Using a simple random sampling, 150 companies listed on the SET are chosen as the sample in this study (See Appendix A). The sources of the integrated reporting information are the 2012 to 2015 annual integrated reports of the companies selected. This source is adopted because the annual report is a conveniently available source of information and is provided regularly every year (Amram and Devi, 2008). It also represents the main form of corporate communication to stakeholders. Moreover, many previous studies relating to the integrated reporting have used annual reports as their main source of information. The data are collected between July 2015 to June 2016.

Table 3.1: Population and sample

	Industry	Population		Sample	
		Number	Percent	Number	Percent
1	Agricultural and food	50	9.04	15	10
2	Financial	56	10.13	18	12
3	Industrial	85	15.37	12	8
4	Property and construction	147	26.58	31	20.67
5	Natural resources	37	6.69	21	14
6	Service	98	17.72	26	17.33
7	Consumer products	40	7.23	10	6.67
8	Technology	40	7.23	17	11.33
	Total	553	100	150	100

3.4 Data collection

As mentioned earlier, content analysis will be used as the study method to investigate and quantify the extent, nature, and level of IR in annual reports of the 150 sampled listed companies in the SET over the period of 2012 to 2014. Measurement will be by word counts.

The database from library of the SET will be used as the first place to collect the annual reports, because it contains annual reports from all listed companies in Thailand. Information relating to corporate annual reports in the library is kept in four media: paper, CD Rom, PDF files, and electronic letters. In cases where annual reports cannot be sourced from the library, the relevant companies will be contacted so their annual reports from the decade of 2012 to 2015 can be used for data collection. All data will be hand-collected.

3.5 Instrument of study

To measure the variables used in this study, there were six independent variables, two dependent variable, and one control variable. 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; Hackston and Milne, 1996). 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). Based on the limitations imposed by Thai orthography, the study could not use sentence count because Thai is not written with full stops delineating sentences so the method of sentence count could not be used. Moreover, there are no regulations relating to the font or paper size to be employed in producing annual corporate reports. Therefore, line or page counts were also not appropriate for use in this study. 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). First, financial capital reporting is defined as disclosures about the pool of corporate funds. Second, manufactured capital reporting is defined as disclosures about physical objects available for production and provision. Third, intellectual capital reporting relates to the company's knowledge base intangible asset. Fourth, human capital reporting is defined as disclosures about the quality of the competency of and innovation from the corporate's human resources. Fifth, social capital reporting is the sharing of information between companies and their stakeholders and sixth, environmental capital reporting is defined as disclosures about all renewable and non-renewable environmental resources. Companies need to integrate the six capitals into their business models and strategic plans In order to achieve corporate sustainable development (Eccles and Krzus, 2010).

For another dependent variable measurement, Fiori et al. (2009) suggested that corporate financial performance can be measured by profitability, solvency, liquidity, and efficiency. The most common measures of performance are return on assets (ROA), return on equity (ROE) and Tobin's Q (Margolis and Walsh, 2001). ROA is used in this study because it has been commonly and widely used as an indicator of a company's financial performance in previous studies (e.g. Aras et al., 2009; Bhagat and Bolton, 2008). ROA represents the profitability of the firm with respect to the total set of assets. ROA data was collected from the website of the SET (www.set.or.th/set/commomlookup.do). However, this study chooses to pick up Tobin'Q representing as corporate financial performance.

The six independent variables were assessed based on the measures set out in table 4.2. 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, PID, and CEO duality) (See Table 2). Although there have been no previous studies investigating the relationship between corporate governance and integrated reporting, 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 (Garcia-Benau et al., 2013, 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 a control variable (See Table 2). All the independent and control variables used in this study were sourced from company profiles appearing on the website of the SET (www.set.org.th).

Table 3.2: Variable measurement

Variable	Type	Notation	Measurement
Integrated reporting	DV	IR	Content analysis by word count
Financial performance	DV	FIPER	Tobin'Q
Family-owned firms	IDV	FAMOWN	Percentage of common stock owned by family
Government-owned firms	IDV	GOVOWN	Percentage of common stock owned by government
Institution-owned firms	IDV	INSTITU	Percentage of common stock owned by financial institutions
Size of board	IDV	BSIZE	Number of board members
Independent board members	IDV	PID	Proportion of independent board members
CEO duality	IDV	DUAL	Dummy variable of 1 for CEO duality, and 0 for otherwise
CSR award firms	CV	CSRAW	Dummy variable of 1 for CSR award firms, and 0 for otherwise

3.6 Data analysis

In the last part, Data is analyzed by descriptive analysis, independent sample *t*-tests, correlation analysis, and path analysis. Descriptive analysis is used to investigate extent, nature, and level of IR in Thai listed corporate annual reports during 2012-2015. Independent sample *t*-tests are used to test the different levels of integrated reporting in annual reports between groups of interest. Paired sample t-test is used to investigate the pattern of integrated reporting during the period being study. Correlation and multiple regression analysis are used to test the relationship between corporate governance, integrated reporting, and corporate financial performance. Accordance between empirical data and confirmatory factor analysis model is tested by using fit statistics such as chi-square, root mean square of approximation (RMSEA), comparative fit index (CFI), goodness-of-fit index (GFI), and adjusted goodness-of-fit index (AGRI). The equations used for path analysis are shown below:

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

FIPER = a + b1FAMOWN + b2GOVOWN + b3INSTITU + b4BSIZE + b5PID + b6DUAL + b8IR + error

Where:

IR = the level of integrated reporting in annual reports measured by

The number of words determined by content analysis

FIPER	=	Corporate financial performance measured by Tobin'Q
FAMOWN	=	Percentage of common stock owned by family
GOVOWN	=	Percentage of common stock owned by government
INSTITU	=	Percentage of common stock owned by financial institutions
SIZE	=	Number of board members
PID	=	Proportion of independent board members
DUAL	=	Dummy variable of 1 for CEO duality, and 0 for otherwise
CSRAW	=	Dummy variable of 1 for CSR award firms, and 0 for otherwise

Chapter 4:

Findings

In this chapter, the study set the structure within four main sections: extent, nature, and level of integrated reporting in annual reports during 2012 to 2015; the pattern of integrated reporting and different of level if integrated reporting between the group of interest during period being study; the relationship between corporate governance, the level of integrated reporting, and financial performance; and the summary of hypothesis.

4.1 Extent, nature, and level of integrated reporting

Based on the annual reports of the 150 companies sampled in this study, all the companies provided integrated reporting between 2012 and 2015. By descriptive analysis (See Table 4.1), 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 content, extent, and level of integrated reporting in the annual reports found by this study are therefore supported by legitimacy theory 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. However, some of the companies sampled in the study did not 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.

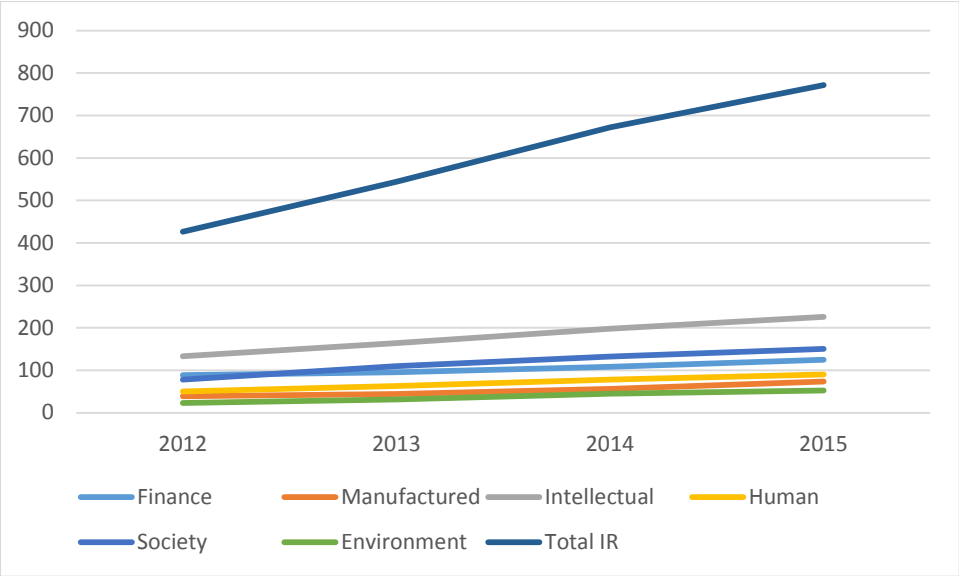
Table 4.1: Extent and level of integrated reporting

Capital	2012		2013		2014		2015		Average words	
	M	SD	M	SD	M	SD	M	SD	M	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	359.39	544.29	449.62	671.98	547.19	771.49	701.22	603.59	503.59

Figure 4.1 indicates a pattern of increased integrated reporting from an average of 426.63 words in 2012 to an average of 544.29 words in 2013, an average of 671.98 words in 2014, and an average of 771.49 words in 2015. This increase most likely occurred because companies have been forced by societal expectations to provide more integrated reporting

and the results of this study are consistent with the prior study of Suttipun (2015) who found an increase in sustainable development reporting by Thai listed companies during the period 2005 to 2012. The result would tend to support legitimacy theory because although integrated reporting is a form of voluntary reporting and is not yet compulsory in Thailand, companies listed in the SET have to pay attention not only to shareholders, investors, and creditors, but also to the expectations of, for instance, customers, labor, society, and the community in which they operate (Deegan, 2002).

Figure 4.1: The pattern of integrated reporting between 2012 and 2015



The study considered integrated reporting separately within the six capitals as well as the total words of integrated reporting and found that in every case, year on year the average words devoted to each capital and the total words increased during the period being studied. Moreover, the most common type of integrated reporting related to intellectual capital which increased from an average of 133.39 words in 2012 to an average of 226.10 words in 2015, while environmental capital reporting was the least common type of integrated reporting during the period being studied growing from an average of 23.39 words in 2012 to an average of 52.88 words in 2015. Surprisingly, although financial capital reporting was higher than social capital reporting in 2012, social capital reporting had overtaken financial capital reporting by 2013. This result was consistent with that of Suttipun (2015) who found that between 2005 and 2012, the most common type of sustainability reporting related to the financial perspective following by the social and environmental perspectives. Signaling theory can explain why there was an increase in the level of integrated reporting because if companies have a reputation for reporting more information about their actions and activities, they will obtain more benefit and value from their stakeholders whose expectations they meet and whose trust they gain. Moreover, companies which provide more information to their stakeholders in order to decrease information asymmetry, are likely to optimize their financing costs, and thus improve their firm value (Frias-Aceituno et al., 2014). Therefore, increasing corporate integrated reporting can bring benefits and value to companies.

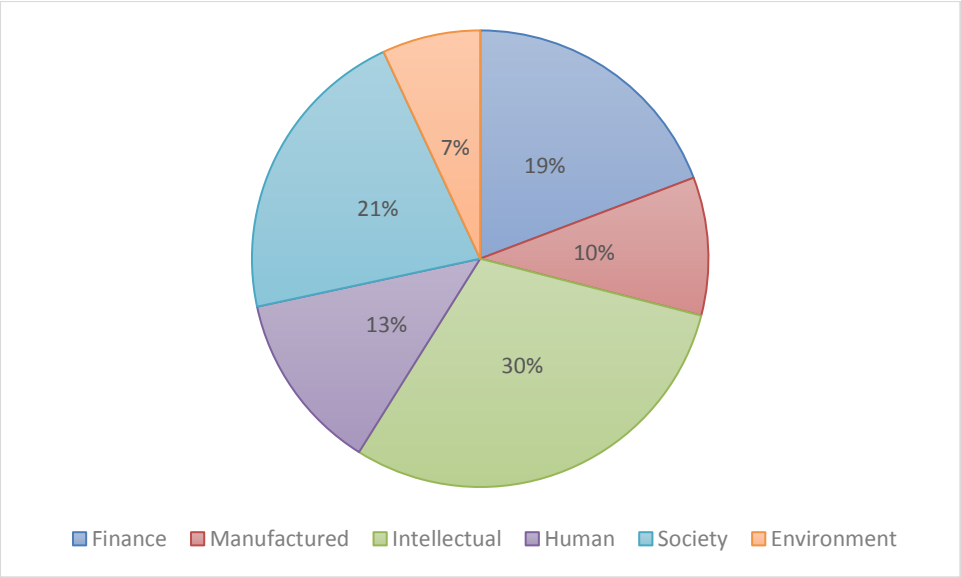
Table 4.2 shows the extent and level of integrated reporting in annual reports by listed companies from the Stock Exchange of Thailand (SET) during 2012 to 2015 separated by the type of industry in Thaiand. As the results, the average level of integrated reporting was 603.59 words (SD = 509.59) which the most common integrated reporting was intellectual capital reporting (180.44 average words) following by social capital reporting (129.27 average words), financial capital reporting (116.08 average words), human capital reporting (76.77 average words), manufactured capital reporting (59.05 average words), and environmental capital reporting (41.98 average words). Within eight industries in the Stock Exchange of Thailand, the companies in technology industry (969.49 average words) provided the most common level of integrated reporting during period being study, while the less common level of integrated reporting was in property and construction industry (262.48 average words) which was around four times smaller than companies in technology industry.

Table 4.2: Cross section between industry and the integrated reporting

Industry	Finance M (SD)	Manufactured M (SD)	Intellectual M (SD)	Human M(SD)	Society M (SD)	Environment M (SD)	Average M (SD)
Agriculture and food	93.00 (24.72)	45.83 (19.98)	133.55 (33.47)	76.40 (38.84)	143.37 (73.52)	23.38 (11.37)	515.53 (187.11)
Finance	117.68 (20.68)	6.46 (5.15)	257.92 (80.40)	57.28 (22.83)	73.63 (26.96)	18.78 (7.64)	531.74 (138.30)
Natural Resource	145.12 (11.62)	112.05 (12.75)	226.68 (22.05)	100.87 (11.05)	176.57 (19.74)	78.02 (7.61)	839.30 (78.21)
Consumer product	75.63 (10.96)	26.73 (11.47)	101.85 (46.48)	17.96 (3.90)	46.25 (14.99)	18.25 (8.16)	286.67 (84.58)
Property & Construct.	89.28 (12.76)	9.65 (2.76)	86.87 (14.52)	27.06 (5.15)	41.27 (7.77)	8.35 (2.69)	262.48 (32.64)
Industrial Product	87.33 (7.03)	76.68 (8.03)	151.13 (7.40)	80.55 (4.99)	100.88 (6.98)	49.15 (5.26)	546.20 (29.44)
Technology	159.51 (26.03)	111.50 (17.67)	260.68 (44.92)	138.60 (23.00)	223.87 (40.37)	75.32 (13.70)	969.49 (144.08)
Service	138.13 (10.62)	93.05 (9.98)	223.17 (20.54)	115.53 (12.47)	213.77 (26.10)	65.96 (7.79)	849.61 (81.17)
Average	116.08 (76.23)	59.05 (44.49)	180.44 (172.30)	76.77 (73.66)	129.27 (118.19)	41.98 (34.59)	603.59 (509.59)

Figure 4.2 shows the pine chart of integrated reporting in Thai listed annual reports by six capital reporting consisting of financial, manufactured, human, intellectual, social, and environmental capital reporting. The findings indicates that the most common integrated reporting was in intellectual capital reporting as 30 percent of total integrated reporting following by social capital reporting (21 percent), human capital reporting (19 percent), human capital reporting (13 percent), manufactured capital reporting (ten percent), and environmental capital reporting (seven percent).

Figure 4.2: The proportion of integrated reporting by capital reporting



4.2 The pattern of integrated reporting and different of level if integrated reporting between the groups of interest

To answer the second research question, paired sample t-tests were used in this study (See Table 4). 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 ('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 Kunsirikun 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 result supports signaling theory's concept that 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 4.3: Paired sample t-tests of integrated reporting during the period being studied

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**

** significant at p<0.001

Table 4.4 is shown to test the different level of integrated reporting in annual reports between SET100 companies and Non-SET100 companies, and between CSR award companies and Non-CSR award companies by using independent sample t-test. In term of company size, SET100 companies (n = 70 firms) provided 868.87 average words of integrated reporting in their annual reports, while Non-SET100 companies (n = 80 firms) disclosed 371.48 average words of integrated reporting. This study finds that there is a significant different level of integrated reporting between SET100 and Non-SET100 companies at 0.01 level. The result in this study was consistent with Suttipun (2015) who found the significant different sustainability reporting in annual reports of Thai listed companies between SET50 firms and Non-SET50 firms. In terms of corporate social responsibility award, there were 35 companies having and experiencing CSR award during period being study, while 115 firms did not have CSR award. To test the different level of integrated reporting between groups of interest, the study finds a significant different level of reporting CSR award companies (868.91 average words) and Non-CSR award companies (522.85 average words) at 0.01 level. The result in this study was consistent with Suttipun (2014) who found the significant different CSR reporting of listed companies in the Stock Exchange of Thailand between CSR award companies and Non-CSR award companies.

Table 4.4: Independent sample t-test

Independent sample t-test		N	Mean	SD	t-test	
					t	Sig.
Company size	SET100	70	868.87	598.306	6.919	.000**
	Non-set100	80	371.48	220.802		
CSR award	Have	35	868.91	584.526	3.709	.000**
	Have no	115	522.85	448.753		

** is significant at 0.01 level, * is significant at 0.05 level

4.3 The relationship between corporate governance, integrated reporting, and financial performance

In this section, the study results are divided within two sub-section: the relationship between corporate governance and the level of integrated reporting within/without controlling by CSR award, and the relationship between the level of integrated reporting and financial performance.

4.3.1 The relationship between corporate governance and integrated reporting

Table 4.5 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 14.65, 2.75 and 7.10 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 5 also shows the correlations between the eight variables consisting of one dependent variable, six independent variables, and one control variable. 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. Based on the correlation coefficients between the variables used in this study, IR had a significant positive correlation with BSIZE and CSRAW at the 0.01 level, and GOVOWN and INSTITU were significantly correlated at the 0.05 level. On the other hand, IR had a significant negative correlation with FAMOWN and PID at the 0.05 level while the correlation between IR and DUAL although positive, was not significant at the 0.05 level.

Table 4.5: Correlation matrix

Variable	IR	FAMOWN	GOVOWN	INSTITU	BSIZE	PID	DUAL	CSRAW
Mean	603.59	14.65	2.75	7.10	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
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

** significant at p<0.01, * significant at p<0.05

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 4.6 in Model 1 the variable CSRAW was used as a control variable so its effect was held constant, while in model 2 the effect of CSRAW was measured along with the effect of the other six independent variables. The result for model 1 show that within the six independent variables, there were significant positive relationships between the level of integrated reporting in annual reports and INSTITU (at the 0.05 level) and BSIZE (at the 0.01 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. The results

from model 2 were the same as those for model 1 but additionally found a significant positive correlation between CSRAW and the level of integrated reporting at the 0.05 level.

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 is explained by the fact that institutions play many stakeholder roles in respect of the companies they finance notably as shareholders, investors and creditors, as well as in their positions within society and the community. Therefore, companies need to serve the expectations of institutions including the reporting of both financial and non-financial information. The study's results were also similar to those of Haji 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 societal expectations about the availability of information relating to corporate decision making (Abeysekera, 2010). In addition, a larger committee is also able to improve the monitoring of corporate actions and activities in the interests of society (Dalton and Dalton, 2005). Moreover, both financial and non-financial information reporting can reduce agency costs between owners and top-management and thereby raise the likelihood of the board opting for the practice of integrated reporting.

The study also 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). The CSR award in Thailand is 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. Based on legitimacy theory, CSR award winners would be more likely to attempt to meet societal expectations for information disclosure through sustainability reporting (Deegan and Gordon, 1998).

Table 4.6: Multiple regression for model 1 and 2

Variable	Model 1		Model 2	
	B	t (sig)	B	t (sig)
Constant	851.414	1.621 (.108)	1324.702	2.314 (.022*)
FAMOWN	-2.612	-1.135 (.259)	-2.217	-.971 (.334)
GOVOWN	5.652	1.455 (.148)	2.674	.648 (.518)
INSTITU	6.991	2.121 (.036*)	6.824	2.095 (.038*)
BSIZE	50.798	2.589 (.005**)	43.238	2.405 (.018*)
PID	-4.781	-.875 (.383)	-4.721	-.874 (.384)
DUAL	370.987	1.682 (.095)	372.446	1.709 (.090)
CSRAW	-		216.731	1.961 (.050*)
R Squared	.203		.228	
Adjusted R Squared	.162		.182	
F-value	4.998 (.000**)		4.936 (.000**)	

** significant at p<0.01, * significant at p<0.05

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, 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 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 CEO's to make voluntary reports including integrated reporting. This study also failed to find a significant relationship between GOVOWN and the level of integrated reporting, which is similar to the findings of Suttipun (2012) of no correlation between government ownership and triple bottom line reporting. This might be because society and stakeholders in Thailand have the same expectations of government-owned companies as those they have for privately owned companies.

4.3.2 The relationship between the level of integrated reporting and financial performance

To test the relationship between integrated reporting and financial performance, this study separate the integrated reporting within six capitals: financial; manufactured; intellectual; human; social; and environment. Therefore, there are two main

TOBIN = a + b1FCR + b2MCR + b3ICR + b4HCR + b5SCR + b6ECR + error

TOBIN = a + b1FCR + b2MCR + b3ICR + b4HCR + b5SCR + b6ECR + b7SCOM + b8CARAW + error (where)

TOBIN	=	Corporate financial performance (Tobin's Q)
FCR	=	Financial capital reporting (Content analysis)
MCR	=	Manufactured capital reporting
ICR	=	Intellectual capital reporting
HCR	=	Human capital reporting
SCR	=	Social capital reporting
ECR	=	Environmental capital reporting
SCOM	=	Size of companies (Dummy variable by 1 as SET100 firms, and 0 as the otherwise)
CARAW	=	CSR award firms (Dummy variable by 1 as CSR award firms, and 0 as the otherwise)

Descriptive analysis and correlation matrix are indicated into table 4.7 to (1) show mean and SD of all variables used in this study, and to (2) test for multicollinearity. As the

results, the average level of intellectual capital reporting (ICR) was 180.44 words following by social capital reporting (SCR) as 129.27 words, financial capital reporting (FCR) as 116.08 words, human capital reporting (HCR) as 76.77 words, manufactured capital reporting (MCR) as 59.05 words, and environmental capital reporting (ECR) as 41.98 words. Tobin's Q (TOBIN) is used to measure the corporate financial performance in this study. The average Tobin's Q was 1.65 (SD = 0.94). To test for multicollinearity between the variables used in this study, table 4.7 is also shown the correlation matrix of nine variables consisting of one dependent variable, six independent variables, and two control variables. The Variance Inflation Factors (VIF) of correlation matrix between variables was 1.386. Therefore, this can be alright to test using multiple regression model by all variables because the VIF is not over 10 which is multicollinarity problem.

Table 4.7: Correlation matrix of relationship between integrated reporting and performance

Variable	TOBIN	FCR	MCR	ICR	HCR	SCR	ECR	CSRAW
Mean	1.65	116.08	59.05	180.44	76.77	129.27	41.98	0.76
SD	0.94	76.23	64.49	172.30	129.27	148.19	44.59	0.42
TOBIN	1	.040	.170*	.110	.067	.126	.054	.033
FCR		1	.589**	.536**	.733**	.658**	.574**	.153
MCR			1	.488**	.742**	.737**	.824**	.281**
ICR				1	.661**	.604**	.604**	.284**
HCR					1	.892**	.792**	.196*
SCR						1	.768**	.268**
ECR							1	.270**
CSRAW								1

** is significant at 0.01 level, * is significant at 0.05 level

To test the effect of integrated reporting on corporate financial performance of listed companies from the Stock Exchange of Thailand, table 4.8 is indicated within two models: without control variable; and within control variables. In model 1, the study finds the significantly positive effect of manufactured capital reporting (MCR) on the corporate financial performance at 0.01 level, while there was a negatively significant influence of environmental capital reporting (ECR) on the Tobin's Q at 0.05 level. However, the study finds no significant effect of financial (FCR), intellectual (ICR), human (HCR), and social (SCR) capital reporting on the corporate financial performance at 0.05 level.

In model 2, the study tests the effect of integrated reporting on corporate financial performance controlling by corporate characteristics: size of company; and CSR award. As the results, the findings indicate the same result with model 1 that there was positive (MCR), negative (ECR), and no (FCR, ICR, HCR, and SCR) effects on the Tobin's Q controlling by size of company and CSR award. Moreover, the study finds the positively significant effect of CSR award on the corporate financial performance at 0.01 level, while no effect of company size on the financial performance at 0.05 level.

Table 4.8: Multiple regression

Variable	Model 1		Model 2	
	B	t (sig)	B	t (sig)
Constant	1.560	10.726 (.000**)	1.281	2.697 (.008**)
FCR	-.001	-.729 (.467)	-.001	-.844 (.383)
MCR	.006	2.737 (.007**)	.007	2.961 (.004**)
ICR	.001	1.525 (.129)	.001	1.457 (.147)
HCR	-.003	-1.175 (.242)	-.003	-1.292 (.199)
SCR	.002	1.445 (.151)	.002	1.361 (.176)
ECR	-.007	-2.063 (.041*)	-.007	-1.996 (.048*)
SCOM	-	-	.195	1.051 (.292)
CSRAW	-	-	.334	2.707 (.009**)
R Square	.083		.105	
Adjust R Square	.045		.055	
F-value	2.171 (.049*)		2.074 (.042*)	

** is significant at 0.01 level, * is significant at 0.05 level

4.4 The summary of hypothesis

Within eight hypotheses in this study, the results are found to accept three hypotheses and reject the other five hypotheses following by the Table 4.9 below.

Table 4.9: The summary of hypothesis

No.	Variables	Direction	Result
H1	FAMOWN	+	Reject
H2	GOVOWN	+/-	Reject
H3	INSTITU	+	Accept
H4	BSIZE	+	Accept
H5	PID	+	Reject
H6	DUAL	-	Reject
H7	IR	+	Reject
H8	CSRAW	+	Accept

Chapter 5:

Summary and Discussion

This study provides three main objectives which are (1) to study extent, nature, and level of integrated reporting in annual reports of Thai listed corporate in the Stock Exchange of Thailand during 2012 to 2015, (2) to investigate the changes/pattern of the integrated reporting in annual reports of Thai listed company during period being study, and (3) to test the relationship between corporate governance, integrated reporting, and financial performance. The population in this study is all the companies listed on the SET. Using a simple random sampling, 150 companies listed on the SET are chosen as the sample in this study. The sources of the integrated reporting information are the 2012 to 2015 annual integrated reports of the companies selected. Descriptive analysis, paired and independent sample t-test, and multiple regression are used to analyze the data in this study. In this chapter, the study structures within four main sections: summary and discussion; contribution and implication; and limitation and suggestion for future study.

5.1 Summary and discussion

5.1.1 Extent, nature, and level of integrated reporting

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). This increase most likely occurred because companies have been forced by societal expectations to provide more integrated reporting and the results of this study are consistent with the prior study of Suttipun (2015) who found an increase in sustainable development reporting by Thai listed companies during the period 2005 to 2012. The result would tend to support legitimacy theory because although integrated reporting is a form of voluntary reporting and is not yet compulsory in Thailand, companies listed in the SET have to pay attention not only to shareholders, investors, and creditors, but also to the expectations of, for instance, customers, labor, society, and the community in which they operate (Deegan, 2002).

5.1.2 Pattern and difference of integrated reporting between the groups of interest

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 ('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 Kunsirikun 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 result supports signaling theory's concept that 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.

5.1.3 The relationship between corporate governance, integrated reporting, and financial performance

In 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 find that 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 0.01 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.

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 is explained by the fact that institutions play many stakeholder roles in respect of the companies they finance notably as shareholders, investors and creditors, as well as in their positions within society and the community. Therefore, companies need to serve the expectations of institutions including the reporting of both financial and non-financial information. The study's results were also similar to those of Haji 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 societal expectations about the availability of information relating to corporate decision making (Abeysekera, 2010). In addition, a larger committee is also able to improve the monitoring of corporate actions and activities in the interests of society (Dalton and Dalton, 2005). Moreover, both financial and non-financial information reporting can reduce agency costs between owners and top-management and thereby raise the likelihood of the board opting for the practice of integrated reporting.

The study also 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). The CSR award in Thailand is 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. Based on legitimacy theory, 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, 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 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 CEO's to make voluntary reports including integrated reporting. This study also failed to find a significant relationship between GOVOWN and the level of integrated reporting, which is similar to the findings of Suttipun (2012) of no correlation between government ownership and triple bottom line reporting. This might be because society and stakeholders in Thailand have the same expectations of government-owned companies as those they have for privately owned companies.

In the relationship between the level of integrated reporting and financial performance in the annual reports of the SET listed companies sampled between 2012 and 2015, the results find that there is a significantly positive effect of manufactured capital reporting (MCR) on the corporate financial performance at 0.01 level, while there was a negatively significant influence of environmental capital reporting (ECR) on the Tobin's Q at 0.05 level. However, the study finds no significant effect of financial (FCR), intellectual (ICR), human (HCR), and social (SCR) capital reporting on the corporate financial performance at 0.05 level.

5.2 Contribution and implication

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 findings of this study are able to support legitimacy theory and signaling theory in that even though integrated reporting is still voluntary by listed companies in Thailand, societal expectations can force companies to incorporate integrated reporting into their annual reports. The study's results also support agency theory in that the

reason for the relationship between corporate governance and integrated reporting is in part a result of measures adopted to reduce information asymmetry and conflicts of interest between owners and their managements. 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

5.3 Limitation and Suggestion for future study

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. Third, the study collected only the quantity of integrated reporting, but did not consider the quality of the reporting. Therefore, there is no guarantee that the greater level of integrated reporting undertaken by Thai listed companies can be classified as constituting better reporting by those companies. 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. Finally the quality of integrated reporting should also be considered in a future study.

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Appendix A:

The samples used in this study

รายชื่อกลุ่มตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย

1.	บริษัท จีเอฟพีที จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
2 .	บริษัท ศรีตรังแอโกรอินดัสทรี จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
3.	บริษัท เจริญโภคภัณฑ์อาหาร จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
4.	บริษัท ไมเนอร์ อินเตอร์เนชั่นแนล จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
5.	บริษัท ไทยยูเนี่ยน กรุ๊ป จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
6.	ธนาคารกรุงศรีอยุธยา จำกัด (มหาชน)	ธุรกิจการเงิน
7.	ธนาคารกรุงเทพ จำกัด (มหาชน)	ธุรกิจการเงิน
8.	ธนาคารกสิกรไทย จำกัด (มหาชน)	ธุรกิจการเงิน
9.	ธนาคารเกียรตินาคิน จำกัด (มหาชน)	ธุรกิจการเงิน
10.	ธนาคารกรุงไทย จำกัด (มหาชน)	ธุรกิจการเงิน
11.	บริษัท บัตรกรุงไทย จำกัด (มหาชน)	ธุรกิจการเงิน
12.	ธนาคาร ไทยพาณิชย์ จำกัด (มหาชน)	ธุรกิจการเงิน
13.	ธนาคารทหารไทย จำกัด (มหาชน)	ธุรกิจการเงิน
14.	บริษัท อินโดรามา เวนเจอร์ส จำกัด (มหาชน)	สินค้าอุตสาหกรรม
15.	บริษัท พีทีที โกลบอล เคมิคอล จำกัด (มหาชน)	สินค้าอุตสาหกรรม
16.	บริษัท อมตะ คอร์ปอเรชัน จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
17.	บริษัท บางกอกแลนด์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
18.	บริษัท ช.การช่าง จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
19.	บริษัท เซ็นทรัลพัฒนา จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
20.	บริษัท โทรีเซนไทย เอเยนต์ซีส์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง

รายชื่อกลุ่มตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย (ต่อ)

21.	บริษัท อิตาเลียนไทย ดีเวล๊อปเมนต์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
22.	บริษัทแลนด์แอนด์เฮ้าส์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
23.	บริษัท แอล.พี.เอ็น.ดีเวลลอปเมนท์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
24.	บริษัท พฤกษา เรียลเอสเตท จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
25.	บริษัท ควอลิตี้เฮ้าส์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
26.	บริษัท ปูนซิเมนต์ไทย จำกัด(มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
27.	บริษัท ปูนซีเมนต์นครหลวง จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
28.	บริษัท แสนสิริ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
29.	บริษัท ศุภาลัย จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
30.	บริษัท ซิโน-ไทย เอ็นจีเนียริ่งแอนด์คอนสตรัคชั่นจำกัด(มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
31.	บริษัท เอสทีพี แอนด์ ไอ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
32.	บริษัท ทิปโก้แอสฟัลท์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
33.	บริษัท ไทคอน อินดัสเทรียล คอนเน็คชั่น จำกัด(มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
34.	บริษัท ทีพีไอ โพลีน จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
35.	บริษัท โตโย-ไทย คอร์ปอเรชั่น จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
36.	บริษัท ไดนาสตี้เซรามิค จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
37.	บริษัท บ้านปู จำกัด (มหาชน)	ทรัพยากร
38.	บริษัท บางจากปิโตรเลียม จำกัด (มหาชน)	ทรัพยากร
39.	บริษัท ผลิตไฟฟ้า จำกัด (มหาชน)	ทรัพยากร
40.	บริษัท เอสโซ่ (ประเทศไทย) จำกัด (มหาชน)	ทรัพยากร

รายชื่อกลุ่มตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย (ต่อ)

41.	บริษัท โกลว์ พลังงาน จำกัด (มหาชน)	ทรัพยากร
42.	บริษัท กันกุลเอ็นจิเนียริ่ง จำกัด (มหาชน)	ทรัพยากร
43.	บริษัท ไออาร์พีซี จำกัด (มหาชน)	ทรัพยากร
44.	บริษัท ปตท. จำกัด (มหาชน)	ทรัพยากร
45.	บริษัท ผลิตไฟฟ้าราชบุรีโฮลดิ้ง จำกัด (มหาชน)	ทรัพยากร
46.	บริษัท ปตท. สำรวจและผลิตปิโตรเลียม จำกัด (มหาชน)	ทรัพยากร
47.	บริษัท ไทยออยล์ จำกัด (มหาชน)	ทรัพยากร
48.	บริษัท โรงแรมเซ็นทรัลพลาซา จำกัด (มหาชน)	บริการ
49.	บริษัท กรุงเทพดุสิตเวชการ จำกัด(มหาชน)	บริการ
50.	บริษัท โรงพยาบาลบำรุงราษฎร์ จำกัด (มหาชน)	บริการ
51.	บริษัท บางกอก เชน ฮอสปิทอล จำกัด (มหาชน)	บริการ
52.	บริษัท ท่าอากาศยานไทย จำกัด (มหาชน)	บริการ
53.	บริษัท บีทีเอส กรุ๊ป โฮลดิ้งส์ จำกัด (มหาชน)	บริการ
54.	บริษัท โทรีเซนไทย เอเยนต์ซีส์ จำกัด (มหาชน)	บริการ
55.	บริษัท บิ๊กซี ซูเปอร์เซ็นเตอร์ จำกัด (มหาชน)	บริการ
56.	บริษัท การบินไทย จำกัด (มหาชน)	บริการ
57.	บริษัท เบอร์ลี่ ยุคเกอร์ จำกัด (มหาชน)	บริการ
58.	บริษัท ซีพี ออลล์ จำกัด (มหาชน)	บริการ
59.	บริษัท สยามโกลบอลเฮ้าส์ จำกัด (มหาชน)	บริการ
60.	บริษัท โฮม โปรดักส์ เซ็นเตอร์ จำกัด (มหาชน)	บริการ

รายชื่อกลุ่มตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย (ต่อ)

61.	บริษัท ล็อกซเล่ย์ จำกัด (มหาชน)	บริการ
62.	บริษัท ห้างสรรพสินค้าโรบินสัน จำกัด (มหาชน)	บริการ
63.	บริษัท เมเจอร์ ซีนีเพล็กซ์ กรุ๊ป จำกัด (มหาชน)	บริการ
64.	บริษัท แอดวานซ์ อินโฟร์ เซอร์วิส จำกัด (มหาชน)	เทคโนโลยี
65.	บริษัทเดลต้า อีเลคโทรนิคส์ (ประเทศไทย)จำกัด (มหาชน)	เทคโนโลยี
66.	บริษัท โทเท่ิล แอ็คเซ็ส คอมมูนิเคชั่น จำกัด (มหาชน)	เทคโนโลยี
67.	บริษัทจัสมิน อินเตอร์เนชั่นแนล จำกัด (มหาชน)	เทคโนโลยี
68.	บริษัท สามารถคอร์ปอเรชั่น จำกัด (มหาชน)	เทคโนโลยี
69.	บริษัท ไทยคม จำกัด (มหาชน)	เทคโนโลยี
70.	บริษัท ทรู คอร์ปอเรชั่น จำกัด (มหาชน)	เทคโนโลยี

รายชื่อตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์ฯ (ต่อ)

71.	บริษัท ห้องเย็นโชติวัฒน์หาดใหญ่ จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
72.	บริษัท หาดทิพย์ จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
73.	บริษัท น้ำตาลครบุรี จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
74.	บริษัท เพรซิเดนท์ เบเกอรี่ จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
75.	บริษัท เอส แอนด์ พี ซินดิเคท จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
76.	บริษัท เสริมสุข จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
77.	บริษัท อาหารสยาม จำกัด(มหาชน)	เกษตรและอุตสาหกรรมอาหาร
78.	บริษัท ไทยเพรซิเดนท์ฟูดส์ จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
79.	บริษัท ไทยรับเบอร์ลาเท็คซ์คอร์ปอร์เรชั่น (ประเทศไทย)	เกษตรและอุตสาหกรรมอาหาร
80.	บริษัท สหอุตสาหกรรมน้ำมันปาล์ม จำกัด (มหาชน)	เกษตรและอุตสาหกรรมอาหาร
81.	บริษัท ฟินันซ่า จำกัด (มหาชน)	ธุรกิจการเงิน
82.	บริษัท กรุงเทพประกันภัย จำกัด (มหาชน)	ธุรกิจการเงิน
83.	บริษัท บางกอกสหประกันภัย จำกัด (มหาชน)	ธุรกิจการเงิน
84.	บริษัท จรัญประกันภัย จำกัด (มหาชน)	ธุรกิจการเงิน
85.	ธนาคาร ซีไอเอ็มบี ไทย จำกัด (มหาชน)	ธุรกิจการเงิน
86.	บริษัทหลักทรัพย์ เคจีไอ ประเทศไทย จำกัด (มหาชน)	ธุรกิจการเงิน
87.	บริษัทหลักทรัพย์ เมย์แบงก์ กิมเอ็ง ประเทศไทย จำกัด (มหาชน)	ธุรกิจการเงิน
88.	บริษัท ไมด้า ลิสซิ่ง จำกัด (มหาชน)	ธุรกิจการเงิน
89.	บริษัท ทิพยประกันภัย จำกัด (มหาชน)	ธุรกิจการเงิน
90.	บริษัท ประกันภัยไทยวิวัฒน์ จำกัด (มหาชน)	ธุรกิจการเงิน

รายชื่อตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์ฯ (ต่อ)

91.	บริษัท อลูคอน จำกัด (มหาชน)	สินค้าอุตสาหกรรม
92.	บริษัท ฝาจีบ จำกัด (มหาชน)	สินค้าอุตสาหกรรม
93.	บริษัท ซีเอสพี สตีลเซ็นเตอร์ จำกัด (มหาชน)	สินค้าอุตสาหกรรม
94.	บริษัท โกลบอล คอนเน็คชั่นส์ จำกัด (มหาชน)	สินค้าอุตสาหกรรม
95.	บริษัท กู๊ดเยียร์(ประเทศไทย) จำกัด (มหาชน)	สินค้าอุตสาหกรรม
96.	บริษัท สยามภัณฑ์กรุ๊ป จำกัด (มหาชน)	สินค้าอุตสาหกรรม
97.	บริษัท ค้าเหล็กไทย จำกัด (มหาชน)	สินค้าอุตสาหกรรม
98.	บริษัท ชัยวัฒนา แทนเนอรี่ กรุ๊ป จำกัด (มหาชน)	สินค้าอุตสาหกรรม
99.	บริษัท อีซึ่น เฟ้นท์ จำกัด (มหาชน)	สินค้าอุตสาหกรรม
100.	บริษัท ฟูรูกาวา เม็ททัล (ไทยแลนด์) จำกัด (มหาชน)	สินค้าอุตสาหกรรม
101.	บริษัท ชาญอิสสระ ดีเวล็อปเมนท์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
102.	บริษัท ดีคอน โปรดักส์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
103.	บริษัท เจนเนอรัล เอนจิเนียริ่ง จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
104.	บริษัท ยูซิตี้ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
105.	บริษัท พร็อพเพอร์ตี้ เพอร์เฟค จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
106.	บริษัท ควอลิตี้คอนสตรัคชั่น โปรดัคส์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
107.	บริษัท เอสซี แอสเสท คอร์ปอเรชั่น จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
108.	บริษัท ไทย-เยอรมัน เซรามิค อินดัสทรี่ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
109.	บริษัท ทีอาร์ซี คอนสตรัคชั่น จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง
110.	บริษัท วิค แอนด์ ฮุคลันด์ จำกัด (มหาชน)	อสังหาริมทรัพย์และก่อสร้าง

รายชื่อตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์ฯ (ต่อ)

111.	บริษัท เอเชีย กรีน เอนเนอจี จำกัด (มหาชน)	ทรัพยากร
112.	บริษัท บริการเชื้อเพลิงการบินกรุงเทพ จำกัด (มหาชน)	ทรัพยากร
113.	บริษัท ผาแดงอินดัสทรี จำกัด (มหาชน)	ทรัพยากร
114.	บริษัท เอ็ม ดี เอ็กซ์ จำกัด (มหาชน)	ทรัพยากร
115.	บริษัท ลานนารีซอร์สเซส จำกัด (มหาชน)	ทรัพยากร
116.	บริษัท ซัสโก้ จำกัด (มหาชน)	ทรัพยากร
117.	บริษัท อาร์พีซีจี จำกัด (มหาชน)	ทรัพยากร
118.	บริษัท โซลาร์ตรอน จำกัด (มหาชน)	ทรัพยากร
119.	บริษัท ทุ่งคาฮาเบอร์ จำกัด (มหาชน)	ทรัพยากร
120.	บริษัท เด็มโก้ จำกัด (มหาชน)	ทรัพยากร
121.	บริษัท จีเอ็มเอ็ม แกรมมี่ จำกัด (มหาชน)	บริการ
122.	บริษัท แมนดาริน โฮเต็ล จำกัด (มหาชน)	บริการ
123.	บริษัท เนชั่น มัลติมีเดีย กรุ๊ป จำกัด (มหาชน)	บริการ
124.	บริษัท แชงกรี-ลา โฮเต็ล จำกัด (มหาชน)	บริการ
125.	บริษัท สหพัฒนพิบูล จำกัด (มหาชน)	บริการ
126.	บริษัท สยามสปอร์ต ซินดิเคท จำกัด (มหาชน)	บริการ
127.	บริษัท สมิติเวช จำกัด (มหาชน)	บริการ
128.	บริษัท สยามอินเตอร์มัลติมีเดีย จำกัด (มหาชน)	บริการ
129.	บริษัท ไทรทัน โฮลดิ้ง จำกัด (มหาชน)	บริการ
130.	บริษัท โรงพยาบาลวิภาวดี จำกัด (มหาชน)	บริการ

รายชื่อตัวอย่างบริษัทจดทะเบียนในตลาดหลักทรัพย์ฯ (ต่อ)

131.	บริษัท ไทยเรยอน จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
132.	บริษัท ธนูลักษณ์ จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
133.	บริษัท ไอ.ซี.ซี. อินเตอร์เนชั่นแนล จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
134.	บริษัท ไลท์ติ้ง แอนด์ อีควิปเมนท์ จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
135.	บริษัท โมเดอร์นฟอร์มกรุ๊ป จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
136.	บริษัท โอเชียนกลาส จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
137.	บริษัท ซาบีน่า จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
138.	บริษัท สยามสตีลอินเตอร์เนชั่นแนล จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
139.	บริษัท สหยูเนี่ยน จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
140.	บริษัท ไทยวาโก้ จำกัด (มหาชน)	สินค้าอุปโภคบริโภค
141.	บริษัท แอ็ดวานซ์ อินฟอร์เมชั่น เทคโนโลยี จำกัด (มหาชน)	เทคโนโลยี
142.	บริษัท ซีเอส ล็อกซอินโฟ จำกัด (มหาชน)	เทคโนโลยี
143.	บริษัท ดราโก้ พีซีบี จำกัด (มหาชน)	เทคโนโลยี
144.	บริษัท เฟอร์รั่ม จำกัด (มหาชน)	เทคโนโลยี
145.	บริษัท อินเตอร์ลิ้งค์ คอมมิวนิเคชั่น จำกัด (มหาชน)	เทคโนโลยี
146.	บริษัท จัสมิน เทเลคอม ซิสเต็มส์ จำกัด (มหาชน)	เทคโนโลยี
147.	บริษัท เมโทรซิสเต็มส์คอร์ปอเรชั่น จำกัด (มหาชน)	เทคโนโลยี
148.	บริษัท พรีเมียร์ เทคโนโลยี จำกัด (มหาชน)	เทคโนโลยี
149.	ริษัท ซิมโฟนี่ คอมมูนิเคชั่น จำกัด (มหาชน)	เทคโนโลยี
150.	บริษัท ทีทีแอนด์ที จำกัด (มหาชน)	เทคโนโลยี

Appendix B:

Data collecting Form used in this study

แบบเก็บข้อมูลกระดาษทำการ (Working Paper) การเปิดเผยการรายงานแบบบูรณาการของบริษัทที่จดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย ในรายงานประจำปี ระหว่างปี พ.ศ. 2555 - 2558

แบบเก็บข้อมูลกระดาษทำการนี้แบ่งออกเป็น 2 ตอน

ตอนที่ 1: ข้อมูลพื้นฐานของบริษัทและข้อมูลเกี่ยวกับการกำกับดูแลกิจการ

ตอนที่ 2: แบบเก็บข้อมูลกระดาษทำการในรายงานประจำปี ระหว่างปี พ.ศ. 2555 – 2558

ตอนที่ 1: ข้อมูลพื้นฐานของบริษัทและข้อมูลเกี่ยวกับการกำกับดูแลกิจการ

1. ชื่อบริษัท…….....ชื่อย่อ(รหัส).....…...……...

2. ประเภทบริษัท

☐ SET 100 ☐ Non SET 100

3. ลักษณะของอุตสาหกรรม

☐ กลุ่มเกษตรและอุตสาหกรรมอาหาร ☐ กลุ่มอสังหาริมทรัพย์

☐ กลุ่มธุรกิจการเงิน ☐ กลุ่มสินค้าอุปโภค

☐ กลุ่มทรัพยากร ☐ กลุ่มเทคโนโลยี

☐ กลุ่มสินค้าอุตสาหกรรม ☐ กลุ่มบริการ

4.ลักษณะอุตสาหกรรมที่มีผลกระทบต่อสังคมและสิ่งแวดล้อม

☐ มี ☐ ไม่มี

5. ประเภทผู้สอบบัญชี

☐ Big 4 ☐ Non Big 4

6. ร้อยละการถือหุ้นของผู้ถือหุ้นรายใหญ่สูงสุด 5 อันดับแรกต่อจำหนวนหุ้นทั้งหมด……

7. ร้อยละการถือหุ้นโดยบุคคลที่เป็นนามสกุลเดียวกันต่อจำนวนหุ้นทั้งหมด…….

8. ร้อยละการถือหุ้นโดยผู้บริหารต่อจำนวนหุ้นทั้งหมด……

9. ร้อยละการถือหุ้นโดยชาวต่างชาติต่อจำนวนหุ้นทั้งหมด……..

10. ร้อยละการถือหุ้นโดยรัฐบาลต่อจำนวนหุ้นทั้งหมด……

11. ร้อยละการถือหุ้นสถาบันต่อจำนวนหุ้นทั้งหมด…….

12. จำนวนคณะกรรมการบริษัททั้งหมด……..…….

13. ร้อยละของคณะกรรมการตรวจสอบที่เป็นอิสระต่อจำนวนคณะกรรมการทั้งหมด……..……

14. การควบตำแหน่งของประธานคณะกรรมการและผู้จัดการใหญ่

☐ ควบตำแหน่ง ☐ ไม่ควบตำแหน่ง

15. ร้อยละความรู้ความสามารถ ความเชี่ยวชาญทางบัญชีหรือการเงินของคณะกรรมการบริษัท……

16. รางวัลด้านความรับผิดชอบต่อสังคม

ปี 2555 ☐ มี ☐ ไม่มี

ปี 2556 ☐ มี ☐ ไม่มี

ปี 2557 ☐ มี ☐ ไม่มี

ปี 2558 ☐ มี ☐ ไม่มี

17. อัตราผลตอบแทนจากสินทรัพย์ (ROA)

ปี 2555 ร้อยละ ……

ปี 2556 ร้อยละ ……

ปี 2557 ร้อยละ ……

ปี 2558 ร้อยละ ……

18. อัตราผลตอบแทนจากผู้ถือหุ้น (ROE)

ปี 2555 ร้อยละ ……

ปี 2556 ร้อยละ ……

ปี 2557 ร้อยละ ……

ปี 2558 ร้อยละ ……

19. Tobin’s Q

ปี 2555 ……..…

ปี 2556 ……..…

ปี 2557 ……..…

ปี 2558 ……..…

ตอนที่ 2: แบบเก็บข้อมูลกระดาษทำการ ในรายงานประจำปี ระหว่างปี พ.ศ. 2555 – 2558

หัวข้อ 2.1 การเปิดเผยข้อมูลทุนการเงิน (Financial Capital)

ลำดับ	หัวข้อรายงานข้อมูล	นับจำนวนคำ พ.ศ			
		55	56	57	58
1	ข้อมูลเกี่ยวกับกำไรของบริษัท				
2	ข้อมูลเกี่ยวกับหนี้สินของบริษัท				
3	ข้อมูลเกี่ยวกับค่าภาษีอากรของบริษัท				
4	ข้อมูลเกี่ยวกับนโยบายจ่ายเงินปันผล				
5	ข้อมูลเกี่ยวกับความเสี่ยงทางการเงินของบริษัท				
6	ข้อมูลเกี่ยวกับสภาพคล่องทางการเงิน				
7	ข้อมูลเกี่ยวกับแนวโน้มและการเปลี่ยนแปลงที่มีผลกระทบต่อฐานะการเงินและผลการดำเนินงานในอนาคต				
8	ข้อมูลส่วนแบ่งทางการตลาด				
9	ข้อมูลเกี่ยวกับความสามารถในการทำกำไร				
10	ข้อมูลเกี่ยวกับความสามารถในการชำระหนี้ของบริษัท				
รวม					

หัวข้อ 2.2 การเปิดเผยข้อมูลทุนการผลิต (Manufactured Capital)

ลำดับ	หัวข้อรายงานข้อมูล	นับจำนวนคำ พ.ศ.			
		55	56	57	58
1	ข้อมูลการลงทุนด้านการวิจัยและพัฒนาผลิตภัณฑ์				
2	ข้อมูลการลงทุนด้านเทคโนโลยี				
3	ข้อมูลการพัฒนาความรู้ของพนักงานในการใช้เทคโนโลยี				
4	ข้อมูลการผลิตสินค้าและบริการตามกำลังการผลิต				
5	ข้อมูลการใช้ทรัพยากรที่มีประสิทธิภาพในการผลิต				
6	ข้อมูลการรักษาคุณภาพการผลิตสินค้าและบริการ				
7	ข้อมูลการผลิตสินค้าและบริการตามกระบวนการผลิตได้ตามมาตรฐาน				
8	ข้อมูลการใช้เทคโนโลยีในกระบวนการผลิต				
9	ข้อมูลเกี่ยวกับแหล่งที่มาในการจัดหาวัตถุดิบ				
10	ข้อมูลเกี่ยวกับสภาพปัญหากับวัตถุดิบ				
รวม					

หัวข้อ 2.3 การเปิดเผยข้อมูลทุนปัญญา (Intellectual Capital)

ลำดับ	หัวข้อรายงานข้อมูล	นับจำนวนคำ พ.ศ.			
		55	56	57	58
1	ข้อมูลการสนับสนุนการไม่ละเมิดทรัพย์สินทางปัญญาหรือลิขสิทธิ์				
2	สร้างเอกลักษณ์และวัตนกรรมใหม่ ๆ				
3	ข้อมูลการพัฒนาผลิตภัณฑ์				
4	ข้อมูลการได้รับรางวัลของกิจการ				
5	ข้อมูลการสร้างเครื่องข่ายกับสถานศึกษา				
6	ข้อมูลการส่งเสริมคุณธรรมให้เป็นวัฒนธรรมขององค์กรและค่านิยมองค์กร				
7	ข้อมูลการดำเนินธุรกิจตามหลักธรรมาภิบาล				
8	ข้อมูลการแสวงหาทรัพยากรใหม่ ๆ มาทดแทน				
9	ข้อมูลการจัดทำแผนกลยุทธิ์ กำหนดวิสัยทัศน์				
10	ข้อมูลการจัดทำแผนพันธกิจ				
รวม					

หัวข้อ 2.4 การเปิดเผยข้อมูลทุนมนุษย์ (Human Capital)

ลำดับ	หัวข้อรายงานข้อมูล	นับจำนวนคำ พ.ศ.			
		55	56	57	58
1	ข้อมูลจำนวนพนักงานของบริษัท				
2	ข้อมูลกระบวนการร้องเรียนของพนักงาน				
3	ข้อมูลระดับการศึกษาของพนักงานในบริษัท				
4	ข้อมูลส่งเสริมความปลอดภัย ชีวอนามัย				
5	ข้อมูลการส่งเสริมพนักงาน ศึกษาต่อเฉพาะด้าน				
6	ข้อมูลการฝึกอบรมความสามารถของพนักงาน				
7	ข้อมูลการกำหนดบทลงโทษของพนักงาน				
8	ข้อมูลเกี่ยวกับสวัสดิการพนักงาน				
9	ข้อมูลความพึงพอใจงานของพนักงาน				
10	ข้อมูลการประเมินผลการปฏิบัติงานของพนักงาน				
รวม					

หัวข้อ 2.5 การเปิดเผยข้อมูลทุนสังคม (Social and Relationship Capital)

ลำดับ	หัวข้อรายงานข้อมูล	นับจำนวนคำ พ.ศ.			
		55	56	57	58
1	ข้อมูลเกี่ยวกับการบริจาคเงิน				
2	การรายงานข้อมูลของกิจการเกี่ยวกับความรับผิดชอบของกิจการต่อ ผู้ถือหุ้นและสังคมโดยรวม				
3	ข้อมูลรางวัลด้านสังคมของกิจการ				
4	ข้อมูลเกี่ยวกับภาวะเรือนกระจก				
5	ข้อมูลเกี่ยวกับการเคารสิทธิมนุษยชน				
6	ข้อมูลนโยบายเกี่ยวกับการป้องกันทุจริตคอรัปชั่นและการติดสินบนของบริษั				
7	ข้อมูลเกี่ยวกับช่องทางการแจ้งเบาะแสการกระทำผิดหรือข้อร้องเรียน				
8	ข้อมูลเกี่ยวโครงการ กิจกรรมส่งเสริมความรับผิดชอบต่อชุมชนและสังคม				
9	นโยบายการมีส่วนร่วมต่อชุมชนและสังคม				
10	ข้อมูลเกี่ยวกับสุขภาพและความปลอดภัยของประชาชนในชุมชนและสังคม				
รวม					

หัวข้อ 2.6 การเปิดเผยข้อมูลทุนธรรมชาติ (Natural Capital)

ลำดับ	หัวข้อรายงานข้อมูล	นับจำนวนคำ พ.ศ.			
		55	56	57	58
1	ข้อมูลรายงานของบริษัทที่เกี่ยวกับความรับผิดชอบต่อสิ่งแวดล้อม				
2	ข้อมูลเกี่ยวกับการใช้พลังงานและทรัพยากรธรรมชาติอย่างมีประสิทธิภาพ				
3	ข้อมูลเกี่ยวกับผู้เชี่ยวชาญด้านสิ่งแวดล้อมในการดำเนินงานของกิจการ				
4	ข้อมูลเกี่ยวกับโครงการ กิจกรรมสิ่งแวดล้อม				
5	ข้อมูลรางวัลด้านสิ่งแวดล้อมของกิจการ				
6	ข้อมูลเกี่ยวข้องกับการอนุรักษ์สิ่งแวดล้อมและทรัพยากรธรรมชาติ				
7	ข้อมูลเกี่ยวกับนโยบายสิ่งแวดล้อม				
8	ข้อมูลการใช้พลังงานของกิจการ				
9	ข้อมูลการสนับสนุนการให้พลังงานทดแทน				
10	ข้อมูลการจัดการสิ่งแวดล้อมของกิจการรอบ ๆ บริษัท				
รวม					
รวมทั้งหมด					

Appendix C:

Description of Integrated Reporting

คำอธิบายแบบเก็บข้อมูลกระดาษทำการ (Working Paper)

ตอนที่ 2: แบบเก็บข้อมูลกระดาษทำการ ในรายงานประจำปี ระหว่างปี พ.ศ. 2555 – 2558

1. การเปิดเผยข้อมูลทุนการเงิน (Financial Capital)

1.1 ข้อมูลเกี่ยวกับกำไรของบริษัท คือ รายงานแสดงผลการดำเนินงาน เพื่อวัดผลการดำเนินงานของธุรกิจว่ามีรายได้และค่าใช้จ่ายรอบระยะเวลานั้นเท่าใด และเมื่อนำรายได้หักค่าใช้จ่ายแล้ว จะเป็นกำไรสุทธิหรือขาดทุนสุทธิ

1.2 ข้อมูลเกี่ยวกับหนี้สินของบริษัท คือ รายการแสดงหนี้สินของบริษัท

1.3 ข้อมูลด้านภาษีอากร คือ ภาษีมูลค่าเพิ่ม ภาษีธุรกิจเฉพาะ ภาษีเงินได้- นิติบุคคล ภาษีหัก ณ ที่จ่าย หรืออากรแสตมป์ แป็นไปตามเงื่อนไขทางภาษีอากรที่ได้กำหนดเอาไว้

1.4 ข้อมูลเกี่ยวกับนโยบายการจ่ายเงินปันผล คือ การกำหนดการจ่ายเงินปันผลตามงบการเงินของกิจการ นโยบายการจ่ายเงินปันผลจากกำไรสุทธิประจำปีของบริษัท

1.5 ข้อมูลเกี่ยวกับความเสี่ยงทางการเงินของบริษัท คือ ความเสี่ยงที่เกิดจากความไม่พร้อม มีปัญหาทางการเงิน

1.6 ข้อมูลเกี่ยวกับสภาพคล่อง คือ เงินสด เงินฝากในธนาคาร ตราสารเปลี่ยนมือที่มีความ คล่องตัวใช้แลกเปลี่ยนเป็นเงินสดได้ง่ายในเวลาอันสั้น ความเสี่ยงด้านสภาพคล่อง

1.7 ข้อมูลเกี่ยวกับแนวโน้มและการเปลี่ยนแปลงที่มีผลกระทบต่อฐานะการเงินและผลการดำเนินงานในอนาคต คือ การวิเคราะห์โครงการทางการเงินเป็นกระบวนการวิเคราะห์ผลประโยชน์และค่าใช้จ่ายในรูปตัวเงินของโครงการ เพื่อประเมินศักยภาพของโครงการว่าสามารถทำกำไรให้แก่ผู้เป็นเจ้าของโครงการหรือไม่

1.8 ข้อมูลส่วนแบ่งทางการตลาด คือ การกำหนดตลาดเป้าหมาการจัดแบ่งลูกค้าที่มีอยู่ทั้งหมดออกเป็นกลุ่ม ๆ

1.9 ข้อมูลเกี่ยวกับความสามารถในการทำกำไร คือ ความสามารถในการทำกำไรของธุรกิจ มีการวางแผนทางการเงินที่ดี ให้เกิดผลตอบแทนในรูปกำไรให้กับธุรกิจมากหรือน้อยอย่างไร

1.10 ข้อมูลเกี่ยวกับความสามารถในการชำระหนี้ของบริษัท คือ เป็นรายงานที่ให้ข้อมูลที่สามารถเกี่ยวกับการชำระหนี้ของบริษัทที่เป็นไปตามข้อตกลง

2. การเปิดเผยข้อมูลทุนการผลิต (Manufactured Capital)

2.1 ข้อมูลการลงทุนด้านการวิจัยและพัฒนาผลิตภัณฑ์ คือ การลงทุนด้านวิจัยและพัฒนาโดยเฉพาะที่เป็นภูมิปัญญาที่เกิดจากการสร้างสรรค์และ เพิ่มมูลค่าที่เกิดจากนวัตกรรมการเปลี่ยนแปลงด้านต่างๆ เช่น แนวคิด พฤติกรรม วิธีปฏิบัติที่คาดว่าจะดีขึ้น

2.2 ข้อมูลการลงทุนในข้อมูลด้านเทคโนโลยี คือการลงทุนด้านเทคโนโลยี โดยเฉพาะที่เป็นภูมิปัญญาที่เกิดจากการสร้างสรรค์และ เพิ่มมูลค่าที่เกิดจากนวัตกรรมการเปลี่ยนแปลงด้านต่างๆ เช่น แนวคิด พฤติกรรม วิธีปฏิบัติที่คาดว่าจะดีขึ้น

2.3 ข้อมูลการพัฒนาความรู้ของพนักงานในการใช้เทคโนโลยี คือ การใช้เทคโนโลยีในการผลิต เช่นมีการใช้เครื่องจักรในการผลิตสินค้าพนักงานต้องได้รับการฝึกอบรมการใช้เครื่องจักรอย่างถูกต้อง เพื่อให้พนักงานมีความรู้ความชำนาญ มีความคุ้นเคยในการใช้เครื่องจักร

2.4 ข้อมูลการผลิตสินค้าและบริการตามกำลังการผลิต คือ การพิจารณากำลังการผลิตของเครื่องจักรเปรียบเทียบกับปริมาณการผลิตจริงซึ่งต้องขึ้นอยู่กับฤดูกาลและปริมาณของวัตถุดิบเพื่อให้ได้มูลค่าการผลิตในแต่ละปีและพิจารณาจากคำสั่งซื้อของลูกค้าด้วย

2.5 ข้อมูลการใช้ทรัพยากรที่มีประสิทธิภาพในการผลิต คือ การให้ความสำคัญต่อการนำทรัพยากรมาใช้อย่างรู้คุณค่า ลดความสูญเปล่าโดยไม่จำเป็น คำนึงถึงผลกระทบในทางลบที่อาจเกิดขึ้นจากกระบวนการผลิตและการกำจัดผลิตภัณฑ์

2.6 ข้อมูลการรักษาคุณภาพการผลิตสินค้าและบริการ คือ การควบคุมและรักษาระดับมาตรฐานคุณภาพสินค้าให้อยู่ในเกณฑ์ที่กำหนดไว้ตามมาตรฐานทั่วไปเพื่อให้เป็นที่ยอมรับ และน่าเชื่อถือ ต่อลูกค้า

2.7 ข้อมูลการผลิตสินค้าและบริการตามกระบวนการผลิตได้มาตรฐาน คือ ขั้นตอนกระบวนการที่ทำให้ปัจจัยการผลิตมีการเปลี่ยนแปลง เพื่อให้ได้ผลิตภัณฑ์ตามต้องการมีคุณภาพได้มาตรฐานในการผลิตต่าง ๆ เช่น Quality Circle Control ระบบ TPM Total Productive Maintenance

2.8 ข้อมูลการใช้เทคโนโลยีในกระบวนการผลิต คือ การใช้เทคโนโลยีในการผลิตที่ทันสมัย

2.9 ข้อมูลเกี่ยวกับแหล่งที่มาในการจัดหาวัตถุดิบ คือ การดำเนินงานตามขั้นตอนต่าง ๆ เพื่อให้ได้มาซึ่งวัตถุดิบ

2.10 ข้อมูลเกี่ยวกับสภาพปัญหากับวัตถุดิบ คือ กระบวนการ ซื้อวัตถุดิบแล้วนำมาผลิตตามกรรมวิธีหรือกระบวนการผลิตอาจประสบปัญหาอื่น ๆ ตามมา

3. การเปิดเผยข้อมูลทุนปัญญา (Intellectual Capital)

3.1 ข้อมูลการสนับสนุนการไม่ละเมิดทรัพย์สินทางปัญญาหรือลิขสิทธิ์ คือ การไม่ละเมิดทรัพย์สินทางปัญหาหรือลิขสิทธิ์ ไม่ว่าจะเป็นภายในบริษัทหรือภายนอกบริษัท

3.2 สร้างเอกลักษณ์และวัตนกรรมใหม่ ๆ คือ การพัฒนาผลิตภัณฑ์ให้แตกต่างโดดเด่นจากคู่แข่งขัน มีการคิดค้นนวัตกรรมที่ยังไม่มีผู้ผลิตรายใดผลิต เพื่อเป็นจุดขายให้กับธุรกิจ

3.3 ข้อมูลการจัดทำแผนพัฒนาผลิตภัณฑ์ คือ ปรับปรุงพัฒนาผลิตภัณฑ์ให้เกิดความหลากหลายได้ตรงกับความต้องการของผู้บริโภค

3.4 ข้อมูลการได้รับรางวัลของกิจการ คือ การส่งเสริมการประกวดรางวัล การได้รับรางวัลของบริษัท

3.5 ข้อมูลการสร้างเครื่องข่ายกับสถานศึกษา คือ การจัดกระบวนการเรียนรู้โดยผ่านการทำงานร่วมกันหน่วยที่เกี่ยวข้องกับสถานศึกษา การรับนักศึกษาฝึกงานเพื่อให้นักศึกษาเกิดประสบการณ์จากการปฏิบัติงานจริง

3.6 ข้อมูลการส่งเสริมคุณธรรมให้เป็นวัฒนธรรมขององค์กรค่านิยมองค์กร คือ การส่งเสริมให้พนักงานผู้บริหารมีความซื่อสัตย์ มีความเป็นผู้นำที่ดี กล้าที่จะเปลี่ยนแปลงรับสิ่งใหม่ ๆ ส่งเสริมการทำงานร่วมเป็นทีม

3.7 ข้อมูลการดำเนินธุรกิจตามหลักธรรมาภิบาล คือ ซื่อสัตย์ โปร่งใส ดำเนินธุรกิจด้วยความขยันอุตสาหะ ซื่อสัตย์ยุติธรรม ยึดมั่นในความถูกต้อง ไม่สนับสนุนการประพฤติทุจริตคอร์รัปชั่น ไม่สนับสนุนให้ผู้บริหารและพนักงานสร้างความสำเร็จของงานด้วยวิธีการทุจริตการให้หรือการรับสินบนเพื่อให้ได้มาซึ่งผลประโยชน์ของบริษัท ตนเองหรือผู้อื่น

3.8 ข้อมูลการแสวงหาทรัพยากรใหม่ ๆ มาทดแทน คือ ศึกษาและแสวงหาโอกาสทางธุรกิจ เช่น มีนโยบายเปิดตลาดและส่งเสริมการลงทุนของภาครัฐบาลในต่างประเทศเป็นต้น

3.9 ข้อมูลการจัดทำแผนกลยุทธ์ กำหนดวิสัยทัศน์ เป้าหมาย คือ บริษัทชี้แจงข้อมูลให้รู้ถึงสิ่งที่บริษัทต้องการจะเป็นในอนาคต บอกให้รู้ถึงเส้นทางเดินของหน่วยงานในอนาคต

3.10 ข้อมูลการจัดทำแผนพันธกิจ คือ บริษัทชี้แจ้งข้อมูลให้รู้ถึงขอบเขตการดำเนินงานของหน่วยงาน บอกให้รู้ถึงสาเหตุของการดำรงอยู่ และมุ่งเน้นที่บทบาทหน้าที่ ที่จะต้องทำ

4. การเปิดเผยข้อมูลทุนมนุษย์ (Human Capital)

4.1 ข้อมูลจำนวนพนักงานของกิจการ คือ กำลังแรงงานการทำงานของพนักงาน อัตรากำลังแรงงาน สภาวะการทำงานของพนักงาน

4.2 ข้อมูลกระบวนการร้องเรียนพนักงาน คือ การกำหนดข้อร้องเรียน และการสอบสวนของพนักงาน

4.3 ข้อมูลระดับการศึกษาของพนักงานในบริษัท คือ วุฒิการศึกษาที่ได้รับจากมหาวิทยาลัยหรือสถาบันการศึกษาระดับอุดมศึกษา ตรงกับตำแหน่งงานที่ทำ

4.4 ข้อมูลส่งเสริมความปลอดภัย ชีวอนามัย คือ การส่งเสริมและสนับสนุนการดูแลสวัสดิภาพและคุณภาพชีวิตของพนักงานให้ดีที่สุด เช่นการจัดให้มีการตรวจสอบความปลอดภัยของสถานที่ทำงานสม่ำเสมอ ติดตั้งระบบเตือนภัยภายในอาคาร ให้ความรู้เรื่องสุขภาพอนามัย ส่งเสริมให้พนักงานออกกำลังกาย

4.5 ข้อมูลการส่งเสริมพนักงาน ศึกษาต่อเฉพาะด้าน คือ การส่งเสริมด้านการศึกษาโดยมอบทุนการศึกษาเพื่อความชำนาญเฉพาะด้าน และนำความรู้มาจัดการบริหารองค์กรต่อไปในอนาคต

4.6 ข้อมูลการฝึกอบรม สมรรถะความสามารถของพนักงาน คือ การเปิดโอกาสให้พนักงานทุกคนได้รับการอบรมทั้งจากภายในองค์กรและภายนอกองค์กรเพื่อเพิ่มพูนทักษะในการทำงาน แสดงศักยภาพในการแสดงความสามารถอย่างเต็มที่ มีการพัฒนาอาชีพ เพื่อสร้างความมั่นคงและความเจริญก้าวหน้าตามศักยาภาพของพนักงานแต่ละคน

4.7 ข้อมูลการกำหนดบทลงโทษพนักงาน คือ บริษัทได้กำหนดบทลงโทษในกรณีที่มีการฝ่าฝืนในการนำข้อมูลภายในของบริษัทฯ ไปใช้เพื่อผลประโยชน์ส่วนตนไว้ในคู่มือจริยธรรมธุรกิจของบริษัทฯ

4.8 ข้อมูลเกี่ยวกับสวัสดิการพนักงาน คือ ผลประโชยน์ที่พนักงานได้รับ เป็นเงินทดแทน หรือสิทธิเบิกค่ารักษาพยาบาลได้ตามอัตราที่บริษัทกำหนด

4.9 ข้อมูลความพึงพอใจงานของพนักงาน คือ ความพึงพอใจในการปฏิบัติงานของพนักงานในองค์กรการมีทัศนคติต่อการปฏิบัติงานในทางบวกของผู้ปฏิบัติงาน มีความกระตือรือร้น มีความมุ่งมั่น มีความคิดสร้างสรรค์ มีขวัญและกาลังใจที่ดีต่องานที่ปฏิบัติ

4.10 ข้อมูลการประเมินผลการปฏิบัติงานคือ การวัดผลการปฏิบัติงานที่โปร่งใส และเป็นธรรม โดยพิจารณาจากผลงาน ความรู้ ความสามารถ ความรับผิดชอบและความมุ่งมั่นในงาน มีการพิจารณาปรับโครงสร้างตามตำแหน่ง ตามศักยภาพของพนักงาน

5. การเปิดเผยข้อมูลทุนสังคม (Social and Relationship Capital)

5.1 ข้อมูลการบริจาคเงิน เช่น การมอบทุนการศึกษา อบรมความรู้ต่าง ๆ การสอนอาชีพ การบริจาคเงิน สิ่งของให้แก่ชุมชน เพื่อปรับปรุงและพัฒนาคุณภาพชีวิตของคนในชุมชน

5.2 การรายงานข้อมูลของกิจการเกี่ยวกับความรับผิดชอบของกิจการต่อผู้ถือหุ้นและสังคมโดยรวม คือ การดูแลปฏิบัติต่อผู้มีส่วนได้เสียอย่างเป็นธรรม ประกอบด้วย ผู้ถือหุ้น ผู้ลงทุน เจ้าหนี้ ลูกค้า คู่แข่งขัน ชุมชน สังคม ให้ได้รับข้อมูลอย่างทั่วถึงและถูกต้อง

5.3 ข้อมูลรางวัลด้านสังคมของบริษัท คือ การได้รับรางวัลต่าง ๆ จากการดำเนินธุรกิจ เช่น ได้รับรางวัล Investor's Choic Award รางวัล CSR รางวัลผู้บริหารดีเด่นเป็นต้น

5.4 ข้อมูลเกี่ยวกับภาวะเรือนกระจก คือ การรายงานภาวะเรือนกระจก มลภาวะเรือนกระจกที่เกิดจากการดำเนินงานของกิจการ ปริมาณการปล่อยก๊าซเรือนกระจก การลดปริมาณก๊าซเรือนกระจก

5.5 ข้อมูลเกี่ยวกับการเคารพสิทธิมนุษยชน คือ ความเคารพในสิทธิของบุคคลตามที่กฎหมายกำหนด

5.6 ข้อมูลนโยบายเกี่ยวกับการป้องกันทุจริต และการติดสินบนของบริษัท คือ ข้อกำหนดนโยบายที่ต่อต้านการทุจริตทั้งภายในและภายนอกองค์กร เรียกร้องดำเนินการยอมรับสินบน

5.7 ข้อมูลช่องทางการแจ้งเบาะแสการกระทำผิดหรือข้อร้องเรียน คือ คู่ค้าหรือสาธารณชนทั่วไป แจ้งข้อมูลร้องเรียนอันเกี่ยวกับพฤติกรรมไม่เหมาะสม ช่องทางในการสื่อสารการร้องเรียนของผู้บริโภค

5.8 ข้อมูลเกี่ยวกับโครงการ หรือกิจกรรมส่งเสริมความรับผิดชอบต่อชุมชน และสังคม คือ การร่วมกันจัดทำโครงการส่งเสริมความรับผิดชอบต่อสังคม

5.9 นโยบายความรับผิดชอบต่อชุมชนและสังคม คือ การกำหนดนโยบายภายใต้พื้นฐานจริยธรรม เพื่อให้เกิดความเป็นธรรมต่อผู้มีส่วนได้เสียทุกฝ่าย

5.10 ข้อมูลเกี่ยวกับสุขภาพและความปลอดภัยของประชาชนในชุมชนและสังคม คือ องค์กรธุรกิจให้การสนับสนุนและมีส่วนร่วมด้านการดูแลสุขภาพและความปลอดภัยของชุมชนตามความเหมาะสม

6. การเปิดเผยข้อมูลทุนธรรมชาติ (Natural Capital)

6.1 ข้อมูลการใช้ทรัพยากรธรรมชาติ คือ ปริมาณการใช้พลังงานและทรัพยากรของกิจการ การใช้ทรัพยากรในกระบวนการผลิต

6.2 ข้อมูลเกี่ยวกับการใช้พลังงานทรัพยากรธรรมชาติอย่างมีประสิทธิภาพ คือ การใช้พลังงานและทรัพยากรของกิจการอย่างมีประโยชน์สูงสุด

6.3 ข้อมูลเกี่ยวกับผู้เชี่ยวชาญด้านสิ่งแวดล้อมในการดำเนินงานของกิจการ คือ การทำหน้าที่ให้บริการตรวจสอบคุณภาพสิ่งแวดล้อม และงานตรวจวิเคราะห์สภาพแวดล้อมในการดำเนินงานของกิจการ

6.4 ข้อมูลเกี่ยวกับโครงการ หรือกิจกรรมสิ่งแวดล้อม คือ

6.5 ข้อมูลรางวัลด้านสิ่งแวดล้อมของกิจการ คือ การได้รับรางวัลต่าง ๆ จากการดำเนินธุรกิจ เช่น รางวัล CSR รางวัลการจัดการสิ่งแวดล้อมอย่างยั่งยืน รางวัลการอนุรักษ์ธรรมชาติ

6.6 ข้อมูลการตัดสินใจของธุรกิจที่เกี่ยวข้องกับการอนุรักษ์สิ่งแวดล้อมและทรัพยากรธรรมชาติ คือ องค์กรมีการจัดการของเสียผ่านการใช้แล้วสามารถนำมาใช้ใหม่ได้เพื่อเป็นการอนุรักษ์ทรัพยากรและลดผลเสียต่อสิ่งแวดล้อม

6.7 ข้อมูลเกี่ยวกับนโยบายสิ่งแวดล้อม คือ นโยบายการดำเนินธุรกิจบนพื้นฐานการคำนึงถึงสิ่งแวดล้อม

6.8 ข้อมูลการใช้พลังงานของกิจการ คือ ข้อมูลการใช้พลังงานของ ซึ่งได้แก่ น้ำมัน พลังลม ถ่านหินเป็นเชื้อเพลิง ที่ใช้ในการผลิตพลังงานไฟฟ้า

6.9 ข้อมูลการสนับสนุนการให้พลังงานทดแทน คือ การสนับสนุนการผลิตโดยการใช้พลังงานทดแทนให้ความสำคัญกับการพัฒนาพลังงานสะอาดไม่ก่อให้เกิดมลพิษได้จากธรรมชาติ

6.10 ข้อมูลการจัดการสิ่งแวดล้อมรอบ ๆ บริษัท คือ การรายงานวิธีการจัดการผลกระทบของการดำเนินธุรกิจที่มีต่อดิน น้ำ อากาศ ทรัพยากรธรรมชาติ พันธุ์พืช พันธุ์สัตว์

The Reason of Triple Bottom Line Reporting in Thailand

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Abstract:

The study aimed to investigate the Triple Bottom Line (TBL) Reporting in annual reports of companies listed from the Stock Exchange of Thailand (SET), and to examine the relationship between corporate governance, corporate characteristics, TBL reporting, and firm value. By content analysis, 2012-2014 annual reports were used to quantify the TBL reporting of 235 Thai listed companies. Descriptive analysis, correlation matrix, and path analysis were used to analyze data. As the results, the average words of TBL reporting were 3197.67 words. There was an increase of TBL reporting in corporate annual reports during period being study. Economic reporting was the most common reporting following by social and environmental information reporting. The level of TBL reporting was significantly influenced by corporate governance and corporate characteristics. Moreover, there was a positive correlation between size of committee, size of company, the level of TBL reporting, and firm value. This was the first empirical evidence to test the correlation between corporate governance, corporate characteristics, the TBL reporting, and firm value in Thailand explained by stakeholder theory.

Keywords: Triple Bottom Line reporting, corporate governance, corporate characteristic, firm value, and stakeholder theory

1. Introduction

To be a part of the world, corporations are being pressured to respond not only their shareholders and investors, but also the other stakeholders such as customers, labors, suppliers, society, community, and environment. It is because the corporations are reflecting the growth of stakeholder demands. In this context, corporate information disclosures are included and forced by their stakeholder needs either. However, corporate information reporting is indicated in different mediums to different stakeholders. For example, the corporations use their annual reports to provide financial information reporting for shareholders, investors, and creditors. On the other hand, stand-alone reports, websites, and letters are used to disclose non-financial information reporting to their customers, labors, society, community, and environment. The Triple Bottom Line (TBL) reporting differs from the traditional financial reporting (i.e. corporate financial annual report) and stand-alone non-financial reporting (i.e. corporate social responsibility report, or environmental report) as it is included both financial and non-financial information reporting within one report (Elkington, 1997). The concept of TBL was created by Elkington (1997) who developed the new reporting framework to measure and disclose within three main perspectives consisting of economic, social, and environmental. The framework of TBL reporting is focused on the interrelated dimensions of profit, people, and planet. Moreover, the TBL reporting is one of the most important measurement tools available to encourage the corporate sustainable development goals.

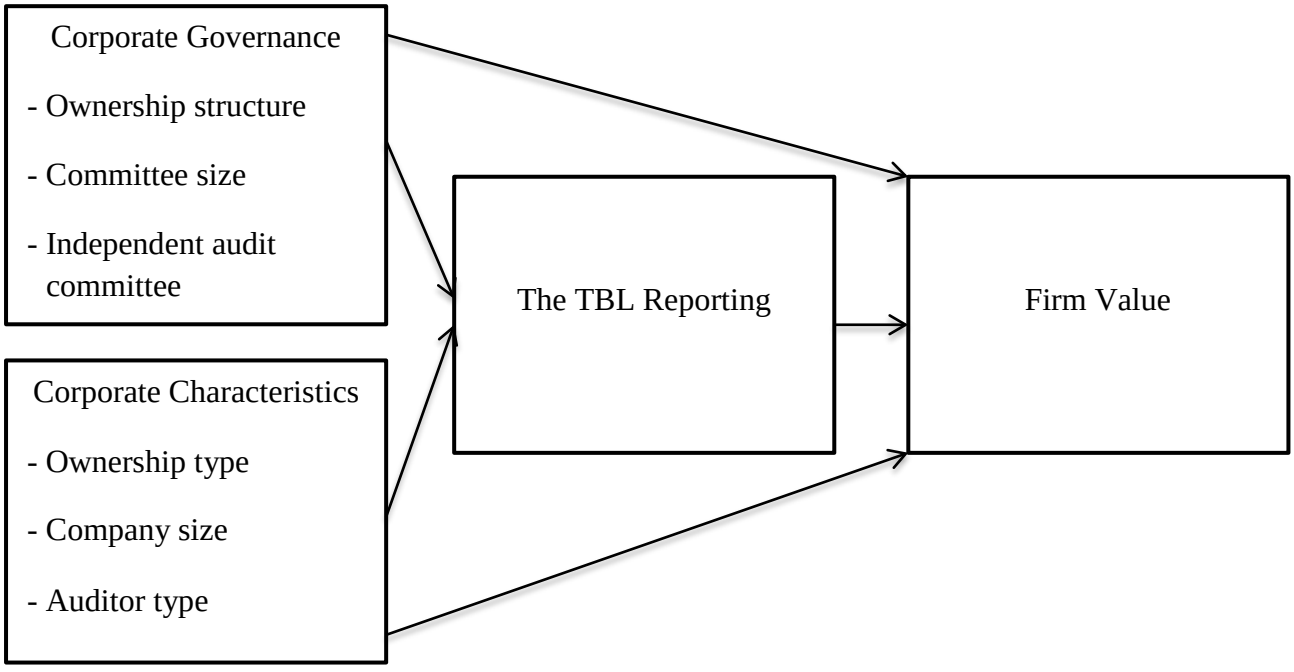
The traditional financial annual reports are not specific to disclose non-financial information that represents significant social and environmental information to serve the other stakeholder (Guthrie et al., 2006). Therefore, to meet the demands of all stakeholders, the corporations have begun to complement their traditional financial annual reports with non-financial reporting by using the TBL reporting (Haji and Ghazali, 2013). However, unlike in many advanced economics where the TBL reporting is mandatory reporting already such as the United States, the United Kingdom, Japan, Australia, and many European countries (Li et al., 2012, Ho and Taylor, 2007), such disclosures are still voluntary and less commonly practiced in emerging economics especially in Asia. Moreover, even though there were several literatures of voluntary reporting in Thailand such as environmental disclosures (Naklerd and Sutipun, 2016), corporate social responsibility reporting (Suttipun, 2014), and sustainable development reporting (Sutipun and Saelee, 2015), there was still a little evidence of the TBL reporting. No research studied the TBL reporting in Thailand as a longitudinal study. Therefore, the pattern, type, and level of TBL reporting are still unclear. This is because there was a little evidences about the TBL reporting practices in developing economics (Wanderley et al., 2008), and the TBL reporting in Asian countries remains lower level compared to Europe and North America (KPMG, 2011).

Specifically, little is known about the reason of TBL reporting in Thailand such as which factor influencing the TBL reporting, and how the TBL reporting affect the corporations. In the Thai setting, it is because existing studies have been limited to the relationship between corporate governance, corporate characteristics, firm value, and the other voluntary reporting such as environmental disclosures (Naklerd and Suttipun, 2016),

corporate social responsibility reporting (Suttipun, 2014), sustainable development reporting (Suttipun and Saelee, 2015), and the TBL reporting (Chamnankij and Suttipun, 2016). Moreover, despite literatures on the relationship between corporate governance, corporate characteristics, voluntary reporting, and firm value, there have been only few prior studies examining the link between corporate governance, corporate characteristics, voluntary reporting, and firm value in developed countries but not in emerging economics. Meanwhile, no study specific to the correlation between corporate governance, corporate characteristics, the TBL reporting, and firm value none the less exists.

From research problem statement, there were two main objectives used in the study that were (1) to investigate the Triple Bottom Line (TBL) Reporting in annual reports of companies listed from the Stock Exchange of Thailand during 2012 to 2014, and to examine the relationship between corporate governance, corporate characteristics, TBL reporting, and firm value. To solve the study problems, there were two research questions: (1) did Thai listed companies provide TBL reporting in annual reports, if so how? and (2) was there the relationship between corporate governance, corporate characteristics, TBL reporting, and firm value? Figure 1 shows the framework of study.

Figure 1: Framework of this study



This study provides some implications expected. This will be the first evidence to empirically test the correlation between corporate governance, corporate characteristics, the TBL reporting, and firm value in Thailand, and to implicates to the insight on the relationship in emerging economics especially in Asian context, since many empirical evidences on the TBL reporting were originated by developed countries (See Brammer and Pavelin, 2008, Hackson and Milne, 1996). This study is also anticipated that the results would provide the

knowledge for regulatory bodies regulating the TBL reporting for all-listed companies in Thailand. The study contributes to the growing use of path analysis in accounting research.

The organization of the study is as follows: Section 1 is the introduction. Section 2 is concerned with the theoretical perspective. Section 3 deals with the literature review and hypothesis development. Section 4 details the study methodology, while Section 5 presents the findings and discussions. The concluding remarks and recommendations are provided in Section 6.

2. Theoretical perspectives

There are several theories explaining TBL reporting such as the legitimacy theory (Islam and Deegan, 2010, Guthrie et al., 2004), stakeholder theory (Suttipun, 2015), agency theory (Mele, 2008, Jensen and Mecking, 1976), signaling theory (Brown et al., 2009), and dependency theory (Amran and Devi, 2008). However, the study withdraws stakeholder theory used to explain the reason of TBL reporting in annual reports by listed companies in the SET.

The concept of TBL reporting in Thailand is supported by the stakeholder theory because the corporate existences are depended on their stakeholder demands. Each group of stakeholder has right to receive information from the companies, even though the stakeholders might not use the information, nor have direct influence on the firms (Gray et al., 1998). Different types of stakeholder have different power to compel and affect corporate actions and activities, and the companies need to continually adapt their operating and reporting behaviors (Islam and Deegan, 2010). In addition, the companies also need to maintain the relationship with their stakeholders by frequently providing information such as TBL reporting in annual reports.

According to Fauzi et al. (2007), stakeholders can be classified into two categories: primary and secondary. Primary stakeholders such as customers, suppliers, employees and investors are directly affected by every decision made by the company. On the other hand, secondary stakeholders may be either directly or indirectly affected by the company's decisions. These stakeholders include business groups, local communities, the media, social activist groups, and foreign and local governments.

To adopt the TBL reporting, the companies are required to focus on both financial and non-financial information as the long-term performance rather than only financial information as the short-term performance (Ref). Moreover, corporate long-term performance under the TBL reporting is based on the notion that all stakeholders demands are tended to. Therefore, the needs of stakeholder would be met with the TBL reporting practice. When the companies can satisfy the information demands of their stakeholder, they would benefit to have better financial performance (Nasi et al. 1997). Therefore, this theory can explain the reasons of corporation provide the TBL reporting in annual reports.

3. Literature review and hypothesis development

In earlier times, many companies used either corporate social responsibility reporting or environmental disclosure to disclose their social or environment information separately

with economic information reporting, but the TBL reporting was not common as a media making corporate disclosures (Koestor, 2007). Corporate responsibility is based on three pillars, covering three dimensions: economic, social and environmental, which a company can express through triple bottom line (TBL) reporting. Using TBL reporting, corporate responsibility does not concentrate on a single bottom line which is focused only on economic (financial) disclosures, but also covers the reporting of non-financial information consisting of social and environmental disclosures. However, TBL reporting is not solely a measurement tool for non-financial (social and environment) information, but also encompasses financial (economic) information.

The TBL reporting can influence an idea of sustainable development (Elkington, 1997). This is because (1) the TBL reporting is developed to serve the demands of all stakeholders but not only shareholders, investors, or creditors, (2) the TBL reporting can connect both financial and non-financial information within three main topics: economic; social; and environmental, and (3) the goal of TBL reporting is not aimed to have only corporate sustainable development, but it is also focused on the world sustainable development. To make the corporate TBL goals (Elkington, 1997), there are seven revolutions: markets; values; transparency; life cycle technology; partnership; time; and corporate governance.

In Thailand, listed companies in the SET are required by the SET that they should provide their information to stakeholders using by the guideline of Global Reporting Initiative (GRI) Version 4.0 (SET, 2011). The GRI guideline was developed by the United Nations Environmental Program (GRI, 2011). The GRI Version 4.0 guideline is included corporate vision and mission, the concept and reason of disclosures, financial and non-financial information reporting standards, and analysis of corporate strategic plans. The GRI Version 4.0 guideline is provided nine proxies in four categories of economic information reporting, 45 proxies in 4 categories of social information reporting, and 30 proxies in nine categories of environmental information reporting (See Appendix A). However, although economic reporting is regulated to provide as mandatory reporting by the FAP, social and environmental information reporting are still voluntary reporting.

In Thailand, there were some studies investigating the TBL reporting or sustainable development reporting (See Suttipun, 2012, Chamnankij and Suttipun, 2016, Suttipun and Saelee, 2015). For example, Suttipun (2012) found the relationship between corporate characteristics and the TBL reporting on annual reports in 2011 of Top50 listed companies in the Stock Exchange of Thailand (SET). Chamnankij and Suttipun (2016) found the correlation between corporate governance and the TBL reporting on websites in 2014 of Thai listed companies in the SET. Suttipun and Saelee (2015) found the relationship between corporate governance and the sustainable development reporting on annual report in 2014 of listed companies in Thailand. However, no longitudinal study investigated the relationship between corporate governance, corporate characteristics, the TBL reporting, and firm value in Thailand.

To examine the reason of TBL reporting in annual reports by listed companies from the SET, this study has proposed 13 hypotheses. Moreover, there were four main variables

consisting of corporate governance (ownership structure, size of committee, and the proportion of independent of audit committee), corporate characteristics (size of company, type of ownership, and type of auditor), the TBL reporting, and firm value (Economic Value Added).

3.1 The relationship between corporate governance and TBL reporting

In Asian context, it is common for companies to run their businesses by generation to generation or in the other word is called family business. This kind of business is held by the member of family as the major group of stakeholders (Lu and Batten, 2001). Moreover, top-management and the major stakeholder may be either the same person or the person from the same family. Haniffa and Cooke (2002) stated that family owned companies could have an effect on a voluntary reporting. The family structure businesses tend to provide less voluntary reporting than non-family structure businesses because they would like to keep some information as a secret of their family (Haji and Ghazali, 2013). The prior literatures indicated the negative correlation between ownership structure owned by family and voluntary reporting including the TBL reporting (See Ho and Wong, 2001, Haniffa and Cooke, 2002, Haji and Ghazali, 2013). Therefore, this study is hypothesized that:

H1: There is a negative relationship between ownership structure and the TBL reporting.

The literatures of relationship between size of committee and TBL reporting (voluntary reporting) were in the similar results. For example, several previous studies found a positive correlation between committee size and voluntary reporting (See Haji and Ghazali, 2013, Abeysekera, 2010, Cerbioni and Parbonetti, 2007). By explanation of stakeholder theory, the larger size of committee tends to increase and offer a substantial variety of stakeholder demands for corporate decision making (Abeysekera, 2010). Moreover, larger committee size is also able to improve the monitoring capacity in corporate actions and activities for all of their stakeholder needs (Dalton and Dalton, 2005),. Therefore, the study tests hypothesis that:

H2: There is a positive relationship between size of committee and the TBL reporting.

Ho and Wong (2001) found a positive correlation between the proportion of independence of audit committee and corporate responsibility reporting in annual reports of listed companies in Hong Kong. Haniffa and Cooke (2005), Haji and Ghazali (2013), and Li *et al.* (2008) also found a positive relationship between the proportion of independence of audit committee and intellectual capital disclosures. This is because the independence of audit committee members who hold no managerial position is less opportunistic and more attentive to the demands of all stakeholders. In addition, the independence of audit committee members oftentimes is advocates of voluntary reporting, including the TBL reporting (Li *et al.*, 2008). However, Chamnankij and Suttipun (2016) found no relationship between the proportion of independence of audit committee and the TBL reporting on websites. Therefore, this study is hypothesized that:

H3: There is a positive relationship between proportion of independence of audit committee and the TBL reporting.

3.2 The relationship between corporate characteristics and TBL reporting

The study categorizes companies by type of ownership within two main types either government or private companies. With different number and variety of stakeholders, government and private companies may differ in both quantity and quality of their voluntary reporting including the TBL reporting. However, the evidences of the relationship between ownership type and the TBL reporting leaded to a mixed conclusion. On one hand, Cormier and Gordon (2001), and Tagesson et al. (2009) found that government companies provided more corporate social responsibility reporting than private companies. It is because government companies are more scrutinized, so that there is a pressure from the state as owner, and from the mass medium to meet with their stakeholder demands. On the other hand, Balal (2000) and Secci (2005) found that private companies disclosed more environmental disclosures than government companies because they have more force by government regulation rather than state owned companies. But, Suttipun (2012) found no correlation between type of ownership and the TBL reporting on websites. Therefore, this study is hypothesized that:

H4: There is a relationship between type of ownership and the TBL reporting.

Previous literatures related to this study (See Philip and Philip, 2006; Raar, 2002; Camfferman and Cooke, 2002) found a positive relationship between size of company and voluntary reporting. This is because larger companies are commonly required to provide a greater amount of both financial and non-financial information reporting since the latter serve and relate to larger numbers and varieties of different stakeholders than smaller companies (Cowen et al., 1987). On the other hand, Kumar (2003) found a negative relationship between firms' size and the voluntary reporting due to reduced authority of top management with regard to strategic planning and management. However, Davey (1982) and Amran et al. (2009) did not find such a relationship. Thus, it is hypothesized that:

H5: There is a positive relationship between size of company size and the TBL reporting.

In this study, type of auditor is separated into two types consisting of big-4 auditors, and non-big-4 auditors. By comparison, big-4 audit companies are generally perceived as providing more independent auditing services and abiding more closely by auditing standards than non-big-4 audit firms (Joshi and Gao, 2009) because of the ensuing greater damage to reputation suffered by the big-4 auditors. Firms with greater potential gains from external monitoring would therefore procure the services of big-4 audit firms, e.g. PricewaterhouseCooper, Deloitte, KPMG, and Ernst & Young. However, previous findings on the relationship between auditor type and voluntary reporting lead to mixed results. For example, Joshi and Gao (2009) and Suttipun (2012) found a positive relationship between the type of auditor and the TBL reporting, but Inchausti (1997) found no correlation between the variables. Nevertheless, this study hypothesizes that:

H6: There is a relationship between type of auditor and the TBL reporting.

3.3 The relationship between TBL reporting and firm value

Existing literatures about the reason of TBL reporting on firm value had reported inconclusive findings. There were three main direction results that are positive correlation, negative correlation, and no correlation. On one hand, if the companies would benefit to have better financial performance and firm value (Nasi et al. 1997), they have to satisfy the information demands of their stakeholder including the TBL reporting. For example, Chirapanda and Yoopetch (2008), Nakao et al. (2007), and Kantabutra (2006) found a positive relationship between voluntary reporting and firm performance. On the other hand, the companies may view the TBL reporting as a cost acting to reduce their value or performance. Therefore, they would report as little TBL information as possible to meet their demands (Connelly and Limpaphayom, 2004). Moreover, Nasi et al. (1997) found a negative relationship between corporate social responsibility reporting and financial performance. However, some prior studies had found that there was no significant relationship between voluntary reporting and corporate financial performance in developing countries. For example, Rahman et al. (2010) did not find any relationship between environmental disclosures and corporate financial performance. Therefore, to find out the answer in Thai context, this study hypothesizes that:

H7: There is a positive relationship between the TBL reporting and firm value.

3.4 The relationship between corporate governance and firm value

As mentioned earlier, the previous studies (i.e. McConnell and Servaes, 1990, Short and Keasey, 1999) indicated that the percentage of common stock held by top ten major shareholders correlated firm value. For example, McConnell and Servaes (1990) found that there was a positive relationship between ownership structure and firm value when the percentage of common stock held by top ten major shareholders was during 0 to 50 percent, but it was a negative correlation when the percentage was higher than 50 percent. On the other hand, Short and Keasey (1999) found three ranking of the relationship between ownership structure and firm value with (1) positive correlation during 0 to 12.9 percent, (2) negative correlation during 12.9 to 41.9 percent, and (3) positive correlation from 41.9 percent. This is because many Thai listed companies are family businesses and the major shareholders are family members so they will do their best to maximize firm value (Yammeesri and Herath, 2010). However, family companies can have either better or worse performance is depended on the legal system from each country (La Porta et al., 1997). For example, civil law countries with low protection granted to stakeholders cause a trend toward greater concentration of ownership and consequently, the larger proportion of family companies. On the other hand, common law countries tend to protect stakeholders more, leading to the greater degree of ownership dispersion. Therefore, to test the relationship between both variables, this study hypothesizes that:

H8: There is a relationship between ownership structure and firm value.

As mentions earlier, prior studies found that the larger committee size was correlated with better and grater corporate performance and value (Haji and Ghazali, 2013, Dalton and Dalton, 2005, Pfeffer and Salancik, 2003). This is because the benefits of having larger size of committee in order to increase the monitoring capacity of companies can make (1) more management efficiency and (2) greater corporate performance, even though some costs may be increased (Goodstein et al., 1994). Moreover, Jensen (1993) suggested that size of committee can be more effective when it is not more than seven or eight committees. But, Yammeesri and Herath (2010) found no relationship between both variables. Therefore, the study tests the following hypothesis that:

H9: There is a positive relationship between size of committee and firm value.

The primary role of audit committee is to monitor and review corporate financial statements and information disclosures. Independent audit committee plays very important role in implementing corporate governance principles and improving the firm value (Yemmeesri and Herath, 2010). This is because the independent audit committee is the most entity to safeguard stakeholder demands. The prior studies indicated a positive relationship between the proportion of independent of audit committee and firm value (Klein, 1998, Anderson et al., 2004) Based on the prior evidences, this study hypothesizes that:

H10: There is a positive relationship between proportion of independence of audit committee and firm value.

3.5 The relationship between corporate characteristics and firm value

In Thailand, the government has owned some companies that are important strategies for the State such as public utility, energy and power, and financial businesses. The results of correlation between type of ownership and firm value were so little literatures. For instance, Mak and Li (2001) found that private companies had more firm performance than government companies because although the government firms are run their business like the other private companies, they have the main goals relating to the interests of the Nation rather than having only the profit goals. On the other hand, Eng and Mak (2003) found that government companies provided more firm value assessment than private companies. This is because government firms have had greater investment and funding than private companies, so that the income of greater investment and funding from the government companies should be higher than private firms including firm value. To solve the mixed results, this study hypothesizes that:

H11: There is a relationship between type of ownership and firm value.

The previous studies (See Majumdar, 1997, Almajali et al., 2012) provided evidence that larger firms had a higher value than the smaller companies did. With regard to the relationship between voluntary reporting and firm value, Moneva and Cuellar (2009) found that size of company had positively influenced the voluntary reporting and firm value. Using stakeholder theory, larger companies undertake more actions and activities with making a greater impact on society and environment, and have more number of stakeholders than

smaller companies that why if the larger companies can serve stakeholder demand well, the larger companies will have royalty from them including higher financial performance than the smaller firms (Newson and Deegan 2002). Hence, this study hypothesizes that:

H12: There is a positive relationship between size of company and firm value.

As a mention earlier, it is common for big-4 audit firms to provide the higher and greater quality audit than non-big 4 auditors. However, the prior studies' results on the relationship between auditor type and corporate value were inconclusive. For example, Teoh and Wong (1993) found that limited numbers of investors reacted to a switch by corporations from big-4 to non-big 4 auditors. Hackenbrack and Hogan (2002) found that companies with higher earnings management never switched either from non-big 4 to big-4 auditors or vice versa. Nonetheless, Chan et al. (2011) found no disparity in financial performance regardless of whether the companies engaged the services of big-4 or non-big 4 audit companies. This is because market reactions to company announcements in regard to switching from big-4 to non-big 4 auditors are of non-negative view, especially among shareholders and investors (Chang et al., 2009). Hence, this study hypothesizes that:

H13: There is a relationship between type of auditor and firm value.

4. Methods

The population used in this study was all listed companies (572 firms) of eight main industries in the Stock Exchange of Thailand (SET) (2015). The study did not include the companies that (1) there were no annual reports during 2012 to 2014, (2) the end of accounting date was not in 31st December, (3) registered in the Alternative Market of Thailand (MAI), (4) registered as listed companies after 2012, and (5) were withdrawal by the SET including firms under rehabilitation. By simple random sampling, therefore, there were only 235 firms used as a sample of this study (See Table 1)

Table 1: Sample used in the study

Industry	Population		Sample	
	No.	Percent	No.	Percent
Agriculture and food	51	8.92	20	8.51
Resources	40	6.99	16	6.81
Technology	41	7.17	16	6.81
Financial	59	10.31	24	10.21
Service	101	17.66	42	17.87
Industrial	86	15.03	36	15.32
Customer product	40	6.99	16	6.81
Property and construction	154	26.93	65	27.66
Total	572	100	235	100

Annual reports during 2012 to 2014 were used to quantify the TBL reporting because Thailand has adopted the International Financial Reporting Standards (TFRSs) instead of Thai Accounting Standards (TASs) since 2012 (FAP, 2011). Moreover, although there are several mediums that companies provide their information to stakeholders such as annual reports stand-alone reports, websites, and corporate letters, annual reports are still the most common media of companies. This is because the most recent adjustment to the Thai Financial Reporting Standard No. 24: Related Party Disclosures was made in 2011 by the Federation of Accounting Professions of Thailand to include the concept of intellectual capital. Despite the availability of information through other sources, e.g. websites, stand-alone reports and analyst presentations, this research has utilized only the annual reports to quantify the extent and level of intellectual capital disclosure because they are the source of information which has been widely adopted and well justified in previous related studies (Li et al., 2012; Bozzolan et al., 2003).

This study used the collecting form to collect the secondary data from corporate annual reports that can download from the websites of SET (www.set.or.the). There were three parts in the study collecting form. Firstly, the TBL reporting was quantified by content analysis using word counting. The content analysis by word counting is employed because the method is most commonly used for analyzing the reporting of non-financial information (Gray et al., 1998) and in several prior studies (Raar, 2002). For the TBL reporting, the guidelines of Global Reporting Initiative (GRI) Version 4.0 were used in this study to collect the data (GRI, 2011). The TBL reporting was separated into three main topics: economic; social; and environmental. The GRI Version 4.0 guideline is provided nine proxies in four categories of economic information reporting, 45 proxies in four categories of social information reporting, and 30 proxies in nine categories of environmental information reporting (See Appendix A). Secondly, firm value was collected and measured by Economic Value Added (EVA). Next, corporate governance was collected from ownership structure, size of committee, and proportion of independence of audit committee. Finally, corporate characteristics were measured by type of ownership, size of company, and type of auditor. Table 2 indicates the variables' measurement used in this study.

Table 2: Variable measurement

Variable	Notation	Measurement
1. The TBL reporting	TBLRE	Content analysis by word count
2. Firm value	VALUE	Economic Value Added (EVA)
3. Ownership structure	OWNEST	Percentage of common stock of 10 major shareholders per all common stock
4. Size of committee	COMSIZ	Number of committee
5. Proportion of independence of audit committee	INAUCO	Proportion of independence of audit committee per total audit committee
6. Type of ownership	OWNETY	Dummy proxy by 1 = private firm, 0 = government firm
7. Size of company	FIRMSI	Total asset

8. Type of auditor	AUDIT	Dummy proxy by 1 = Non-big 4 auditor, 0 = Big 4 auditor

All the data was hand collected. To analyze the data of this study, descriptive analysis was used to investigate the TBL reporting in annual reports by Thai listed companies during 2012 to 2014 including the pattern (trend), type, and level of TBL reporting by frequency, percentage, mean, and standard deviation. To test the relationship between corporate governance, corporate characteristics, the level of TBL reporting, and firm value, correlation matrix and path analysis were used. Moreover, there were two main equation used in this study that were:

(1) TBLRE = a + b1OWNEST + b2COMSIZ + b3INAUCO + b4OWNETY + b5FIRMSI + b6AUDIT + error

(2) VALUE = a + b1OWNEST + b2COMSIZ + b3INAUCO + b4OWNETY + b5FIRMSI + b6AUDIT + b6TBLRE + error

Where

TBLRE = The TBL reporting

VALUE = Firm value

OWNEST = Ownership structure

COMSIZ = Size of committee

INAUCO = Proportion of independence of audit committee

OWNETY = Type of ownership

FIRMSI = Size of company

AUDIT = Type of auditor

5. Findings and discussions

This section indicates findings and discussions of (1) the investigation of TBL reporting in annual reports of listed companies from the SET during 2012 to 2014, and (2) the reason of TBL reporting in Thai corporate annual reports. Descriptive analysis, correlation matrix and path analysis were used to analyze the data of study.

Table 3 presents the pattern, type, and level of TBL reporting in annual reports of 235 Thai listed companies during 2012 to 2014. The pattern of reporting showed that there was an increase of TBL reporting in corporate annual reports during period being study from 2631.46 average words to 3637.01 average words. Moreover, the pattern of economic, social, and environmental information reporting also increased the level of disclosures during 2012 to 2014. However, the proportion of average word between economic, social, and

environmental information reporting was around 6.2: 2.5: 1.0. Economic reporting was the most common reporting in this study following by social and environmental information reporting. Therefore, the results prove that Thai listed companies still provide more financial information reporting (economic information) as a mandatory reporting than non-financial information reporting (both social and environmental information) as a voluntary reporting. The average words of TBL reporting during period being study were 3197.67 words.

Table 3: The TBL reporting by average word count

The TBL reporting	Year 2012		Year 2013		Year 2014		Average word
	Mean	SD	Mean	SD	Mean	SD	
Economic	1821.43	1092.47	2097.82	1227.92	2240.70	1269.26	2053.34
Social	559.98	379.53	884.49	558.51	999.60	599.02	814.70
Environmental	250.05	328.94	342.12	388.22	396.71	444.07	329.63
Total	2631.46	1800.94	3324.43	2174.65	3637.01	2312.35	3197.67

The results prove and support the theory used in the study because even though the corporations may still provide financial information reporting (mandatory reporting) rather than non-financial reporting (voluntary reporting), they already pay attention not only shareholders, invertors, and creditors but also the other stakeholder groups as well such as customers, labors, society, community, and environment (Deegan, 2001). The results of pattern, type, and level of TBL reporting argued with Welford (2007) who stated that corporate stakeholder management was lacking in the Asian Pacific Region, and stakeholders cannot be protected in the ways that they should be. Therefore, Thai regulatory organizations (i.e. the SET, FAP, and the Revenue Department) should regulate social and environmental information reporting from a voluntary to mandatory reporting for all Thai listed companies.

Table 4: Descriptive analysis of variables used in the study

Variables	Mean	SD	Minimum	Maximum
TBLRE	3197.67	2003.91	637.00	9160.00
VALUE	2958.12	2174.75	-39231.59	17130.03
OWNEST	69.98	15.49	12.29	98.66
COMSIZ	11.22	2.5	6.00	19.00
INAUCO	0.41	0.39	0.09	1.00
FIRMSI	89546.63	51747.39	82.18	2591745.54
Variables	Frequency		Percentage	
OWNETY				
- Government	9		3.80	
- Private	226		96.20	
AUDIT				
- Big-4 auditors	123		52.30	
- Non-big 4 auditors	112		47.70	

Table 4 tabulates that descriptive analysis results of all variables' used in this study. The level of TBL reporting in Thai corporate annual reports during 2012 to 2014 was 3197.67 average words, within 637 minimum words and 9160 maximum words. The firm value measured by Economic Value Added (EVA) was 2958.12. The average size of committee was 11.22 members within 6 minimum committees and 19 maximum committees. The result of committee size was consistent with Yameesri and Herath (2010) who found 11.36 member of committee size by 245 Thai listed companies from the SET in 2014. Total asset representing size of company was 89546.63 average thousand Baht. The percentage of ownership structure was 69.98 percent. The proportion of independence of audit committee per total audit committee was 0.41 time. Out of 235 sample firms, there were nine government companies (3.80 percent), and 226 private companies (96.20 percent) similarly with the prior study of Welford (2007) finding only 7.8 percent of listed companies in the SET was run by government organizations. 123 and 112 sample companies used the auditing service from Big-4 and Non-big 4.

Table 5 presents the correlation matrix of eight variables' used in this study consisting of TBLRE, VALUE, OWNEST, COMSIZ, INAUCO, OWNETY, FIRMSI, and AUDIT. As the results, TBLRE had a significantly positive correlation with COMSIZ and FRIMSI at 0.01 level, and INAUCO at 0.05 level. On the other hand, there was a negative relationship between TBLRE, and OWNEST and AUDIT at 0.01 level, and between TBLRE and OWNETY at 0.05 level. In terms of firm value, VALUE has a significantly positive correlation with TBLRE, COMBIZ, and FIRMSI at 0.01 level, but a negative correlation with OWNETY and AUDIT at 0.01 and 0.05 level.

Table 5: Correlation matrix

Variables	OWNEST	COMSIZ	INAUCO	FIRMSI	AUDIT	VALUE	TBLRE
OWNETY	-.058	-.125	.043	-.153*	-.076	-.201**	-.164*
OWNEST	1	.105	-.029	.004	-.088	-.110	-.170**
COMSIZ		1	-.116	.315**	-.081	.407**	.192**
INAUCO			1	-.044	.067	.082	.150*
FIRMSI				1	-.054	.399**	.238**
AUDIT					1	-.131*	-.191**
VALUE						1	.241**
TBLRE							1

** is significant at 0.01, * is significant at 0.05

Using chi-square, root mean square of approximation (RMSEA), comparative fit index (CFI), goodness-of-fit index (GFI), and adjusted goodness-of-fit index (AGFI) fit statistics, the study finds a significant accordance between the empirical data and the confirmatory factor analysis model. The path analysis is employed to determine the relationships between corporate governance, corporate characteristics, the level of TBL reporting and firm value (See Table 6). The first layer of the full model analysis investigates the relationship between corporate governance, corporate characteristics and the level of TBL

reporting. The second layer of the full model analysis investigates the relationship between corporate governance, corporate characteristics, the level of TBL reporting and firm value.

Table 6 tabulates two models of path analysis to analyze the reason of TBL reporting in annual reports as (1) the relationship between corporate governance, corporate characteristics, and the level of TBL reporting, and (2) the relationship between corporate governance, corporate characteristics, the level of TBL reporting, and firm value. In Model 1 of Table 6, there was a significantly positive relationship between FRIMSI, INAUCO, and TBLRE at 0.01 level, and between COMSIZ and TBLRE at 0.05 level. On the other hand, TBLRE was significantly negative influenced by OWNETY, OWNEST, and AUDIT at 0.01 level. The correlation between corporate governance and the TBL reporting already proves that the Thai corporations take respond not only their shareholder and investors but also the other stakeholder either. In this light, it is true that the companies cannot be successful in the long term, it they disregard the interests and needs of their stakeholders (Norman and MacDonald, 2008)

Table 6: Path analysis

Model 1 DV = TBLRE	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Bata		
Constant	5042.355	805.984	-	6.256	.000
OWNETY	-1268.279	489.727	-.157	-2.590	.010**
OWNEST	-20.931	6.016	-.209	-3.479	.001**
COMSIZ	91.547	39.511	.147	2.317	.021*
INAUCO	154.103	48.594	.190	3.171	.002**
FIRMSI	.001	.000	.165	2.622	.009**
AUDIT	-662.593	186.675	-.213	-3.549	.000**
R square = .198, Adjusted R square = .177, F-value = 9.393**					

Model 2 DV = VALUE	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Bata		
Constant	5083.625	3276.584	-	1.552	.122
OWNETY	-3399.962	1866.136	-.106	-1.822	.070
OWNEST	-34.968	23.186	-.088	-1.508	.133
COMSIZ	661.476	150.129	.268	4.406	.000**
INAUCO	147.179	186.486	.046	.789	.431
FIRMSI	.005	.001	.264	4.362	.000**
AUDIT	-860.693	720.209	-.070	-1.195	.233
TBLRE	.958	.253	.241	3.791	.000**
R square = .286, Adjusted R square = .264, F-value = 13.014**					

** is significant at 0.01, * is significant at 0.05

The result of a positive influence of COMSIZ on TBLRE was consistent with Haji and Ghazali (2013), Abeysekera (2010), and Cerbioni and Parbonetti (2007) finding a positive correlation between size of committee and voluntary disclosures. By stakeholder theory, the larger committees tend to increase and offer a substantial variety of stakeholder demands for corporate decision making (Abeysekera, 2010). Moreover, the larger committee size is also able to improve the monitoring capacity in corporate actions and activities for all of their stakeholder needs.

From a significantly positive correlation between INAUCO and TBLRE, the result was similar with Haniffa and Cooke (2005), Haji and Ghazali (2013), Ho and Wong (2001), and Li *et al.* (2008) who found a positive relationship between the proportion of independence of audit committee and voluntary information disclosures. It is because the audit committee normally delegates to monitor and review corporate financial statements and information disclosures of annual reports. Therefore, the higher proportion of independent of audit committee can improve and increase more quality and quantity of corporate information disclosures including the TBL reporting between the corporations and their stakeholder needs.

The finding of negative relationship between OWNEST and TBLRE was similar with McConnell and Servaes (1990) finding a negative relationship between ownership structure and voluntary reporting when the percentage of common stock held by top ten major shareholders was higher than 50 percent (this study finding of the average OWNEST was 68.89 percent). This is because the family structure businesses tend to provide less voluntary reporting than non-family structure businesses because they would like to keep some information as a secret of their family (Haji and Ghazali, 2013).

In the reason of TBL reporting influenced by corporate characteristics, there were three variables used in this study: ownership type, company size, and auditor type. On ownership type, the study found a negative correlation between OWNETY and TBLRE. The result was consistent with Cormier and Gordon (2001) and Tagesson et al. (2009) who found that the government companies provided more level of voluntary reporting than the private companies. This is because government companies are more scrutinized, so that there is a pressure from the state as owner, and from the mass medium to meet with their stakeholder demands.

The study finding on an influence of COMSIZ on TBLRE was consistent with Raar (2002), Camfferman and Cooke (2002), Joshi and Gao (2009), and Suttipun (2012). Regarding to company size, the larger firms normally provide a greater level of financial and non-financial information since they have to serve and relate to the larger numbers of different stakeholders vis-à-vis the smaller firms. This result can contribute to prove that stakeholder demands in Thailand (developing country) can force and pressure companies providing the SEP reporting as well as developed countries.

On the AUDIT, companies audited by big-4 audit firms exhibit a higher level of TBL reporting than those by non-big 4 audit firms since the auditors from the big-4 audit firms

attach great importance to the reporting of non-financial information. Big-4 auditors provide their clients with non-financial information reporting guidelines; however, no such guideline is provided by non-big 4 audit firms. This is because big-4 auditors are more likely to suffer serious damage to their images than non-big 4 auditors. Therefore, because of higher reputations, big-4 auditors have more stakeholder power to force the corporations providing the voluntary disclosures in their annual reports than non-big 4 auditors (Suttipun, 2014). Moreover, big-4 auditors have even created voluntary information survey for their partners using three perspectives as economic, social, and environmental. For example, KPMG provides the KPMG International Survey of Sustainable Development (KPMG, 2011) following by the Deloitte Corporate Social Responsibility Report by Deloitte, the EY Survey Cooperation with GreenBiz Group conducted by Ernst & Young, and the Price Waterhouse Cooper Corporate Responsibility Practices Survey by Price Waterhouse Cooper. The result of this relationship indicates the contribution to the companies in their decision-making to choose the auditing partner because there are different extent and level of TBL reporting that are provide as a guideline by each group of auditor.

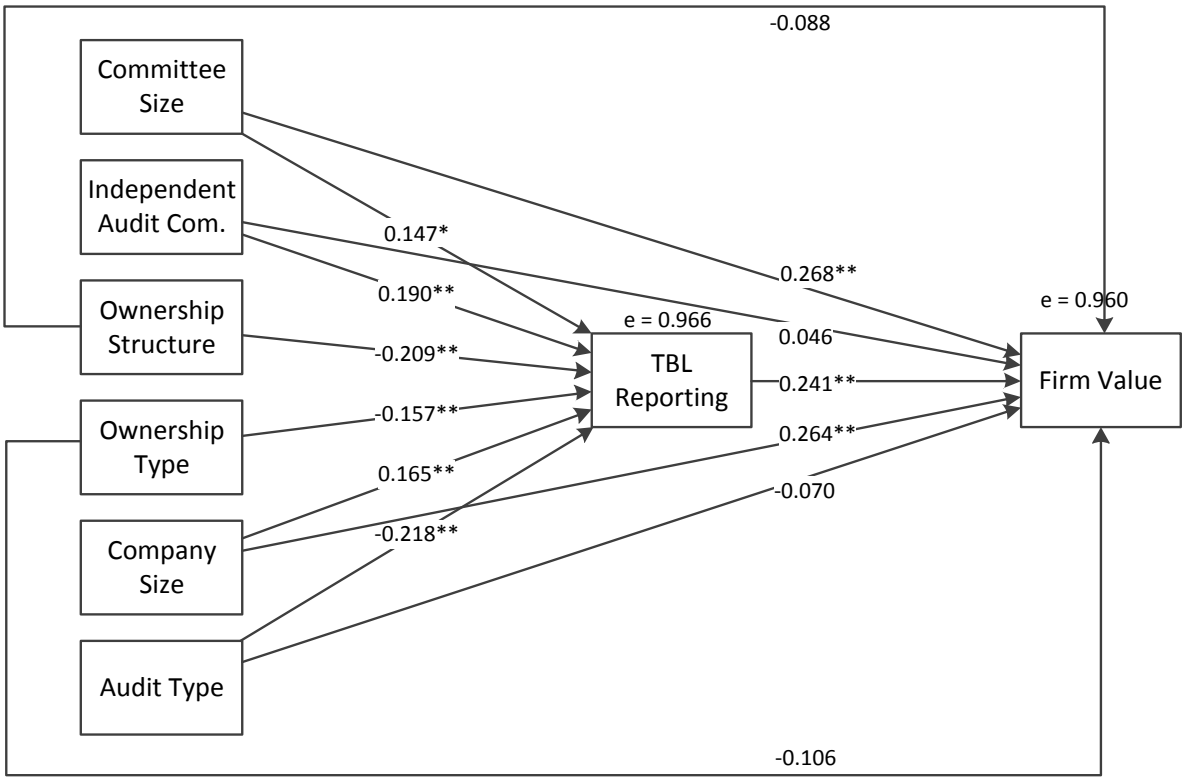
In Model 2 of Table 6, there was a significantly positive relationship between FRIMSI, COMSIZ, TBLRE, and VALUE at 0.01 level. However, no significant effect was from OWNEST, OWNETY, INAUCO, and AUDIT on VALUE. About an influence of TBLRE on VALUE, the result was similar with Chirapanda and Yoopetch (2008), Nakao et al. (2007), and Kantabutra (2006) who found a positive relationship between voluntary reporting and firm performance. This is because the companies would like to have the better benefit on their financial performance and firm value (Nasi et al. 1997), therefore, they have to satisfy the information demands of their stakeholder including the TBL reporting. Moreover, by stakeholder theory, the TBL reporting can serve the demands of corporate stakeholders by increasing financial performance (Mongsawad, 2010). For example, the companies can earn more sales and profit than offset the expense of TBL reporting which make the firms have higher and grater financial performance. From the result, the TBL reporting can contribute to be used as a corporate management tool to help companies complete and achieve high performance.

On the positive relationship between COMSIZ and VALUE, although the result of this study was consistent with Haji and Ghazali (2013), Dalton and Dalton (2005), and Pfeffer and Salancik (2003), the finding of this study provided different results with Yammeesri and Herath (2010) who found no relationship between size of committee and firm value of Thai listed companies in 2004. There are two reasons why larger size of committee can lead the better firm performance and value. First, having the larger committee size might be outweighed by the costs of inefficient information transferring, or timely decision making (Goodstein et al., 1994). Second, this may be because the SET has revised new version of the principle of good corporate governance in 2006 (Lint, 2009) which suggested that corporate committee should set clear policy on social and environmental issues including social and environmental information disclosures. The new version of principle of good corporate governance has launched for listed companies in Thailand in 2007. Therefore, the study

found a positive relationship between COMSIZ and TBLRE, and between COMSIZ and VALUE.

In the positive correlation between FRIMSI and VALUE, the result of this study was consistent with Majumdar (1997), Almajali et al. (2012), and Moneva and Cuellar (2009). Using stakeholder theory explanation, This is because the larger companies undertake more actions and activities with making a greater impact on society and environment, and have more number of stakeholders than smaller companies that why if the larger companies can serve stakeholder demand well, the larger companies will have royalty from them including higher financial performance than the smaller firms (Newson and Deegan 2002). Moreover, this study found a positive relationship between FRIMSI and TBLRE, and between FRIMSI and VALUE either.

Figure 2: The path analysis model



The Figure 2 illustrates the full path analysis model of this study in which the TBL reporting was the dependent variable and the independent variables consisted of corporate governance (Ownership structure, committee size, and independent of audit committee) and corporate characteristics (ownership type, company size, and audit type). Alternatively, with firm value as the dependent variable, corporate governance (Ownership structure, committee size, and independent of audit committee), corporate characteristics (ownership type, company size, and audit type), and the TBL reporting were reviewed as the independent variables. The results of this study indicated that the firm value was significant related by the TBL reporting at 0.01 level. Moreover, all independent variables of both corporate

governance and corporate characteristics had a significant relationship with the TBL reporting at 0.05 and 0.01 level, but only committee size and company size have affected in both the TBL reporting and firm value.

6. Conclusions

To solve the main research problems of (1) a little evidences of TBL reporting in developing countries, (2) an unknown reason of TBL reporting as a voluntary reporting in Thailand explained by stakeholder theory, and (3) the lack of TBL reporting in Thailand as a longitudinal study, this study investigated the TBL reporting in annual reports of listed companies in the SET during 2012 to 2014, and tested the reason of TBL reporting (the relationship between corporate governance (Ownership structure, committee size, and independent of audit committee), corporate characteristics (ownership type, company size, and audit type), the level of TBL reporting, and firm value (Economic Value Added) explained by stakeholder theory. The results showed that the level of TBL reporting in annual reporting during 2012 to 2014 was 3197.67 average words, while there was an increase of TBL reporting in annual reports during period being study. Economic information reporting was still the most common disclosures following by social and environmental information reporting. All variables of both corporate governance and corporate characteristics have influenced the level of TBL reporting of Thai listed companies. Moreover, there was a significant correlation between size of committee, size of company, the level of TBL reporting, and firm value.

The study provided some contributions. This was the first empirical evidence to examine the correlation between corporate governance, corporate characteristics, the TBL reporting, and firm value in Thailand using a longitudinal study, and to implicate to the insight on the relationship in emerging economics especially in Asian context, since many empirical evidences on the TBL reporting were originated and created by developed countries. This study already proved that stakeholder theory can explain the reason of TBL reporting and the relationship between variables used in this study. This study was also anticipated that the results would provide the knowledge for regulatory bodies regulating the TBL reporting for all-listed companies in Thailand. The study contributed to the growing use of path analysis in accounting research.

This study provided some limitations. Firstly, this study used only three proxies on corporate governance, three proxies on corporate characteristics, and a proxy on firm value, but there are many proxies on these variables such as corporate governance (i.e. CEO duality, non-managerial committee, or frequency of audit committee meeting), corporate characteristics (i.e. industry type, corporate age, leverage, or risk), and firm value (Tobin's Q, or Adjust Tobin's Q). Secondly, this study used corporate annual reports as medium to quantify the TBL reporting, but there are the other mediums from the corporations providing information reporting to their stakeholders such as websites, stand-alone reports, and corporate letters. Finally, this study collected only the quantity of TBL reporting, but not for the quality of TBL reporting. Therefore, it is not guarantee whether the higher level of TBL reporting firms can classify as the better TBL reporting companies in this study. To solve the

limitations of the present study, the future study will consider in both quality and quantity of TBL reporting in another media with the alternative variables.

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Appendix A: The TBL Reporting Guideline 4.0 by Category

	Economic information reporting	No. of Proxy
1	Economic environment	4
2	Marketing	2
3	Direct and indirect effect of economy	2
4	Purchasing	1
	Total	9
	Social information reporting	No. of Proxy
1	Labor	16
2	Human rights	12
3	Society and community	9
4	Product responsibility	8
	Total	45
	Environmental information reporting	No. of Proxy
1	Material	2
2	Energy	5
3	Water	3
4	Biodiversity	5
5	Spill, sewage and waste	10
6	Goods and service	2
7	Cooperation	1
8	Transportation	1
9	The other environmental issues	1
	Total	30
	The TBL reporting Total	84

The Association between Board Composition and Intellectual Capital Disclosure: Empirical Evidence from Thailand

Muttanachai Suttipun*

ABSTRACT

The research reported aimed to investigate the extent and level of intellectual capital disclosure of firms listed in the Stock Exchange of Thailand during the period 2012-2014; and to determine the relationship between board composition and the level of intellectual capital disclosure. Content analysis by word count was utilized to quantify the number of words relating to intellectual capital in the 2012-2014 annual reports. The findings revealed an increase in the level of intellectual capital disclosure during the three-year study period, with an overall average of 825.10 words. The study results also showed significantly positive relationships between both the proportion of non-managerial board members (i.e. one proxy representing the board composition) and industry type with the level of intellectual capital disclosure. This study is the first to examine the association between board composition and the level of intellectual capital disclosure within the Thai context.

Keywords: Board composition, intellectual capital disclosure, Thailand

JEL Classification: M410, M140

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1. Introduction

Intellectual capital is an intangible asset that creates firm value, shareholder value, competitive advantage, future profitability and sustainable development (Edvinsson, 1997). According to Abhayawansa and Azim (2014), intellectual capital consists of human, structural and relational capital. Human capital refers to the value provided by employees through the application of skills and expertise, and structural capital is the supportive non-physical infrastructure, processes and databases that enable the human capital to function. Relational capital largely refers to a good rapport with the stakeholders of the business.

In Thailand, The Federation of Accounting Professions (FAP) adopted the International Financial Reporting Standards (IFRS) as its accounting standards in 2012, replacing the Thai Accounting Standards (TAS) (FAP, 2012). The IFRS refer to intellectual capital in IAS38 under the heading of Intangible Assets. However, the disclosure of intellectual capital is not yet regulated because the extent and disclosure of intellectual capital information is not accommodated by traditional accounting standards (Naklerd & Suttipun, 2016). Moreover, there is little knowledge about voluntary reporting of intellectual capital in Thailand because of a lack of attention from regulators and governance organizations (Suttipun, 2015).

There are two reasons for making or not making intellectual capital disclosures. On the one hand, intellectual capital disclosure can reduce information asymmetry resulting in lower agency costs (Healy & Palepu, 2001). For example, Mangena, Pike, and Li (2010) found that companies are motivated to provide intellectual capital information to increase transparency and to thereby lower agency costs. On the other hand, intellectual capital disclosure may incur costs resulting in higher agency costs for companies (Habersam & Piber, 2003). For instance, Beattie and Thomson (2010) found that the key disincentives to companies making voluntary intellectual capital disclosures are that they might harm their competitive position and that they may set a precedent for future disclosure practice.

Unlike in many advanced economies where the disclosure of intellectual capital is mandatory, e.g. Australia, Canada, most European countries, the U.K. and the U.S.A. (Li, Pike & Haniffa, 2008; Li & Mangena, 2014; Cerbioni & Parbonetti, 2007), in Asia, such disclosure is voluntary and less commonly practiced. Nevertheless, some Asian nations, e.g. Bangladesh, Iran and Malaysia, have taken the initiative to encourage listed companies to disclose intellectual capital information (Abhayawansa & Azim, 2014; Anam, Fatima & Majdi, 2011). In Thailand, in common with the majority of countries in Asia, the practice of intellectual capital disclosure is still voluntary and limited in its adoption. Furthermore, there have been no prior studies of intellectual capital disclosure by listed companies in Thailand. The level of intellectual capital disclosure in Thailand thus remains obscure. Moreover, the reasons why Thai businesses make intellectual capital disclosures have not yet been identified.

Prior studies have tested the influence of board composition on external and financial disclosures (Karananoou & Vafeas, 2005; Mangena & Pike, 2005) and it is generally agreed

that board composition plays an important role in determining reporting practices (Li, Pike & Haniffa, 2008) and reducing information asymmetries between top-management and shareholders (Mangena & Pike, 2005).. By definition, intellectual capital disclosure is a reporting process by which information relating to corporate operations and performance is made available to stakeholders, a practice which in turn is influenced by the board composition. The expectation that board composition will influence intellectual capital disclosure is thus derived from the notion that the mechanisms of corporate governance are designed to reduce information asymmetries and conflicts of interest between top-management and shareholders (Li, Pike & Haniffa, 2008), and to respond to social expectations (Mobus, 2005).

The results of previous studies examining the relationship between board composition and intellectual capital disclosure conducted in different countries have been mixed because of differences in the business environments such as the financial reporting environment, differences in regulations, and differences in social expectations For example, Li, Pike and Haniffa (2008), Lipton and Lorsch (1992), Haji and Ghazali (2013), and Klein (2002) found a positive relationship between board composition and intellectual capital disclosure, but Cerbioni and Parbonetti (2007), and McMullen and Raghunardan (1976) found a negative relationship between them. On the other hand, no relationship was found between board composition and intellectual capital disclosure by Gan, Saleh, Abessi, and Huang (2013) or by Taliyang and Jusop, (2011).

In the Thai setting, existing studies have been limited to the relationship between board composition and other voluntary disclosures, including environmental disclosure (Naklerd & Suttipun, 2016), corporate social responsibility reporting (Suttipun & Nuttaphon, 2014), triple bottom-line reporting (Chamnankij & Suttipun, 2016), and sustainable development reporting (Suttipun & Saelee, 2015). However, there has been no study specifically investigating the relationship between corporate board composition and intellectual capital disclosure.

Thus, the objectives of the empirical research reported in this paper were to investigate the extent and level of intellectual capital disclosure of companies listed in the Stock Exchange of Thailand (SET) between 2012 and 2014; and to examine the relationship between board composition and the level of intellectual capital disclosure. To determine the level of intellectual capital disclosure, this research relied on the 2012–2014 annual reports of the firms sampled because the most recent adjustment to the Thai Financial Reporting Standards, No. 28: *Intangible Assets*, in which the concept of intellectual capital was mentioned, was made by the FAP only in 2012. Moreover, prior studies (See Naklerd & Suttipun, 2016; Chamnankij & Suttipun, 2016) in Thailand have indicated that the board composition of companies listed in the SET influences the level of voluntary disclosure following the adoption of the new accounting standards. The research reported endeavored to answer the following questions: (1) What is the extent and level of intellectual capital disclosure of the SET-listed companies from 2012 to 2014? And (2) Does a relationship exist between board composition and the level of intellectual capital disclosure in annual reports?

The research reported sheds light on the level of intellectual capital disclosure in Thailand. It is also anticipated that the findings as to the relationship between board composition and intellectual capital disclosure will contribute to a better understanding of the links between the corporate governance of and intellectual capital disclosure by Thai listed companies. In addition, it is believed that the findings could lead to important changes to the existing regulations regarding intellectual capital disclosure.

The organization of the remainder of this article is as follows: Section 2 describes the theoretical perspective. Sections 3 and 4 deal respectively with the motivation for intellectual capital disclosure and the development of the research hypotheses. Section 5 details the research methodology while Section 6 presents the findings and discussion. The concluding remarks and recommendations are provided in Section 7.

2. Theoretical Perspective

Several theories exist which have the power to account for the relationship between board composition and intellectual capital disclosure, for example, legitimacy theory (Islam & Deegan, 2010; Guthrie, Johanson, Bukh & Sanchez, 2003), stakeholder theory (Suttipun, 2015), agency theory (Mele, 2008; Jensen & Mecking, 1976), signaling theory (Brown, DeJong & Levy, 2009), and dependency theory (Amran & Devi, 2008). This study does not however use either signaling or dependency theory since signaling theory can only explain the effect of voluntary intellectual capital disclosure on other variables such as performance, or firm value (Brown, DeJong & Levy, 2009), and dependency theory cannot explain voluntary intellectual capital disclosures by companies listed in the SET because those companies are first movers, and do not depend on or follow the actions of other companies outside of the SET (Naklerd & Suttipun, 2016).

The empirical research reported therefore utilizes only two theories: agency theory and legitimacy theory, because of their explanatory power and applicability to the Thai setting, where intellectual capital disclosure is voluntary and corporate stakeholders are largely at a disadvantage relative to those in advanced economies. In this study, legitimacy theory is employed to explain the extent and pattern of voluntary intellectual capital disclosure in the annual reports of SET-listed companies motivated by social expectations, between 2012 and 2014, while agency theory is used to explain the relationship between board composition and intellectual capital disclosure.

2.1. Legitimacy Theory

As previously mentioned, legitimacy theory can help to explain the extent and pattern of voluntary intellectual capital disclosure in the annual reports of the SET-listed companies motivated by social expectations.. Specifically, Guthire, Johanson, Bukh, and Sanchez (2003) found that corporations would engage in a social activity if a failure to engage in that activity would bring about a sanction by society. According to Nurunnabi, Hossain, and Hossain

(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.

Furthermore, the disclosure of engagement in constructive activities helps form the basis for a firm's legitimacy and is also an effective means of disseminating information with regard to transparency and accountability to society (Mobus, 2005). Thus, organizations should establish a paradigm based on which they voluntarily make available information on their intellectual capital. Interestingly, according to Deegan (2002), corporations are more likely to undertake voluntary intellectual capital disclosure when their legitimacy is under threat and thus poses a risk to their operation.

2.2. Agency Theory

According to Jensen and Meckling (1976), 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 value. 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.

According to Cerbioni and Parbonetti (2007), the issue of conflicts of interest can be mitigated by the adoption of intellectual capital disclosure because it offers the owners (principals) a means to access more comprehensive corporate information and at the same time increases the accountability and transparency of the management (agents). This study utilized agency theory to explain the connective framework of corporate governance as represented by board composition, and voluntary corporate intellectual capital disclosure since board composition represents an important corporate governance mechanism through which agency problems and information asymmetries can be reduced. Agency theory can therefore explain the relationship between board composition and voluntary intellectual capital disclosure

3. Motivation for Intellectual Capital Disclosure

Intellectual capital is an intangible asset that can improve and increase competitive advantage, firm value and future profitability. According to Abdullah and Sofian (2012), intellectual capital leads to businesses becoming more operationally innovative and creative. Edvinsson (1997) proposed that intellectual capital encompasses human, customer and organizational capital. Human capital refers to employees' ability, attitudes, experiences,

competencies and skills that drive the organization and its resources, while customer capital is concerned with customers' satisfaction and loyalty to a business. Organizational capital refers to internal processes which support efficient and effective operations, e.g. corporate culture, organizational structure and work systems.

Based on the theoretical perspective adopted in this study, intellectual capital disclosure can reduce agency costs and information asymmetries between top-management and shareholders (Li, Pike & Haniffa, 2008), and can also meet social expectations (Mobus, 2005). Aboody and Lev (2000) argued that the potential for conflicts of interest between top-management and shareholders is more acute in respect of intellectual capital disclosure than expenses and investments in tangible assets because intellectual capital disclosure is still unregulated. However, Beattie and Thomson (2010) found that many companies would like to disclose intellectual capital information to increase transparency and reduce their agency costs. Moreover, Mangena, Pike, and Li (2010) found that firms making greater intellectual capital information available normally enjoy a lower cost of capital. On the other hand, the disclosure of intellectual capital information may harm a firm's competitive position and increase its agency costs (Habersam & Piber, 2003).

Most previous studies of intellectual capital disclosure have investigated the practice in developed countries. For example, Li, Mangana, and Pike (2012) examined the effect of audit committees on intellectual capital disclosure by UK listed companies. Bozzolan, Favotto, and Ricceri (2003) investigated the level of intellectual capital disclosure in the annual reports of Italian listed companies and Brennan (2001) studied intellectual capital reporting in the annual reports of listed firms in Ireland. In addition, Chaminade and Roberts (2003) analyzed and compared the practice of intellectual capital disclosure in Norway and Spain, while Guthrie, Petty, and Riccerri (2007) compared intellectual capital disclosure in Hong Kong and Australia and Habersarn and Piber (2003) examined intellectual capital reporting in Italy and Austria.

Unlike in many advanced economies, in most Asian countries intellectual capital disclosure is voluntary and less commonly practiced. Nevertheless, Abhayawansa and Azim (2014) studied listed companies in Bangladesh and reported that most of the firms sampled opted to disclose intellectual capital information in their annual reports, realizing that intellectual capital contributes positively to firm value. In addition, Anam, Fatima, and Majdi (2011) found that intellectual capital disclosure increased the transparency and trustworthiness of Malaysian firms among investors in the capital market. In Thailand, however, the practice of intellectual capital disclosure is very limited and non-compulsory. Furthermore, there has been no prior study of intellectual capital disclosure by listed companies in Thailand so that the extent and level of intellectual capital disclosure in the country is unknown. Moreover, the determinants of intellectual capital disclosure by Thai businesses have yet to be identified.

4. Hypothesis Development

As noted above, there have been prior studies on the extent and nature of intellectual capital disclosure in Bangladesh (Abhayawansa & Azim, 2014), in Malaysia (Anam, Fatima & Majdi, 2011; Gan, Saleh, Abessi & Huang, 2013), and in the UK (Li, Pike & Haniffa, 2008). Meanwhile, Li and Mangena (2014), Anan, Fatima, and Majdi (2011), and Abdullaha and Sofiana (2012) examined the relationship between intellectual capital disclosure and firms' market value. In addition, the relationship between corporate governance and intellectual capital disclosure was studied in Haji and Ghazali (2013), Li, Pike, and Haniffa (2008), Abeysekera (2010), and Cerbioni and Parbonetti (2007).

To investigate if there is a relationship between board composition and intellectual capital disclosure in Thailand, the research described proposed seven hypotheses. In addition, the influence of five independent variables (i.e. the size of committee, CEO duality, proportion of non-managerial committee, size of audit committee, and frequency of audit committee meeting) and two control variables (i.e. company size and industry type) was investigated.

Most previous studies have found a positive relationship between board size and intellectual capital disclosures. For example, Haji and Ghazali (2013), Li, Pike, and Haniffa (2008), and Abeysekera (2010) found that the size of the board of directors is positively correlated to the level of intellectual capital disclosure. This is attributable to the fact that intellectual capital disclosure can reduce the agency costs between shareholders and top management and thereby raise the likelihood of the board opting for the practice of intellectual capital disclosure. Furthermore, according to Lipton and Lorsh (1992), a larger board improves the quality and quantity of information disclosure, including intellectual capital disclosure. In Thailand, prior studies have found a positive relationship between size of the board and voluntary Triple Bottom Line reporting (See Chamnankij & Suttipun, 2016), and between board size and voluntary environmental disclosure (See Naklerd & Suttipun, 2016). On the other hand, Cerbioni and Parbonetti (2007) found a negative relationship between the two variables for firms in European countries. This may be because a larger board could become a hindrance to strategic initiatives and actions (Goodstein, Gautam & Beeker, 1994) and could contribute to a lack of unity in decision-making due to the proliferation of options (Jansen, 1993). Meanwhile, Gan, Saleh, Abessi, and Huang (2013) found no relationship between the size of the board and intellectual capital disclosure. The current research thus hypothesized that:

H1: A positive relationship exists between the size of the board of directors and intellectual capital disclosure.

CEO duality is common in SET-listed companies in Thailand (SET, 2015). According to agency theory, CEO duality plays an influencing role in decisions to make voluntary disclosures to fulfill a monitoring role (Haji & Ghazali, 2013). However, according to Boyd (1996), CEO duality could lead to low voluntary reporting and therefore to limited intellectual capital disclosure. In addition, Cerbioni and Parbonetti (2007) reported a negative

relationship between CEO duality and intellectual capital disclosure 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. It was thus hypothesized that:

H2: A negative relationship exists between CEO duality and intellectual capital disclosure.

According to Fama (1980), a non-managerial board of directors is inclined to adopt measures in response to the demands of stakeholders and the expectations of society. Moreover, Haniffa and Cooke (2005) noted that a non-managerial board would monitor and direct the management's activities, including voluntary reporting. Li *et al.* (2008) found that a higher proportion of non-managerial members on boards of directors encourages top management to embrace the practice of intellectual capital disclosure. According to Haniffa and Cooke (2005), Haji and Ghazali (2013), Li, Pike, and Haniffa (2008), a positive relationship exists between the proportion of non-managerial members of the board and intellectual capital disclosure. This is because board members who hold no managerial position are less opportunistic and more attentive to the needs of all stakeholders. In addition, non-managerial board members often act as advocates of voluntary reporting, including intellectual capital disclosure (Li, Pike & Haniffa, 2008). Thus, this research hypothesized that:

H3: A positive relationship exists between the proportion of non-managerial members of the board of directors and intellectual capital disclosure.

The audit committee plays a significant role in the adoption of voluntary reporting (Klein, 2002) and intellectual capital disclosure (Gan, Saleh, Abessi & Huang, 2013) because the audit committee can exert influence on management to undertake voluntary reporting. Besides, the audit committee can serve as a counterweight to reduce any information asymmetry between the owners (shareholders) and agents (top management). Gan, Saleh, Abessi, and Huang (2013) thus found that a positive relationship existed between the size of the audit committee and intellectual capital disclosure and Klein (2002) also found that the size of the audit committee plays an integral role in the quality and quantity of corporate voluntary reporting. On the other hand, Li, Mangana, and Pike (2012) reported a negative relationship between the size of the audit committee and intellectual capital disclosure. Meanwhile, Taliyang and Jusop (2011) found no relationship between the two variables. It was thus hypothesized that:

H4: A positive relationship exists between the size of the audit committee and intellectual capital disclosure.

According to Taliyang and Jusop (2011), the frequency of audit committee meetings was positively correlated with the agency costs incurred by a business. This is probably because frequent meetings of the audit committee allow for the sharing of information between the committee and management and thus reduces information asymmetry. In addition, Taliyang and Jusop (2011) and Haji and Ghazali (2013) reported a positive relationship between the frequency of audit committee meetings and intellectual capital disclosure by Malaysian listed firms. According to Karamanou and Vafeas (2005), higher frequency audit committee meetings had a positive influence on intellectual capital disclosure. McMullen and Raghunandan (1996), however, found a negative relationship between the frequency of audit committee meetings and earnings restatements. This research hypothesized that:

H5: A positive relationship exists between the frequency of audit committee meetings and intellectual capital disclosure.

In this research, the company size and industry sector variables were controlled (i.e. they were control variables). According to Li, Pike, and Haniffa (2008) and Mangena and Pike (2005), corporate size has been consistently found to be associated with intellectual capital disclosure. In addition, Nurunnabi, Hossain, and Hossain (2011) reported a positive relationship between company size and intellectual capital disclosure by listed companies in Bangladesh. In addition, Abdullaha and Sofiana (2012) reported a positive relationship between company size and intellectual capital disclosure by Malaysian listed companies.

Regarding industry type, Abhayawansa and Azim (2014) reported that companies in highly socially and environmentally sensitive industries (high-profile) tended to disclose more intellectual capital information in their annual reports than those in lower socially and environmentally sensitive industries (low-profile). Industry type was used as a variable controlling the relationship between corporate governance and voluntary reporting in Thailand (Chamnankij & Suttipun, 2016; Najlerd & Suttipun, 2016); moreover, Suttipun (2015) found a positive relationship between both the company size and industry type variables for listed companies in Thailand, in which companies in the agriculture and food, industrial, and resource sectors are regarded as highly socially and environmentally sensitive, while those in the consumer product, financial, property and construction, services, and technology sectors are viewed as being less socially and environmentally sensitive industries. The research reported therefore employed both industry size and type as control variables in testing the following hypotheses:

H6: There is a positive relationship between company size and intellectual capital disclosure.

H7: There is a positive relationship between industry type and intellectual capital disclosure.

5. Research Methodology

5.1. Population, Sample and Sampling

In this research, the population was all the SET-listed companies during the period, 2012–2014, excluding (1) those in the financial sector, as they are subject to a different set of regulations administered by the banking and financial authorities; (2) those whose fiscal year end is not 31st December; and (3) firms under rehabilitation.

By simple random sampling, 223 out of 503 listed companies were selected as the study sample (Table 1). To determine their intellectual capital disclosure, this research relied on the 2012–2014 annual reports of the sampled firms because the most recent adjustment to the Thai Financial Reporting Standards, No. 28: *Intangible Assets* was made in 2012 by the FAP in Thailand to include the concept of intellectual capital. Despite the availability of information through other sources, e.g. websites, stand-alone reports and analyst presentations, this research utilized only annual reports to quantify the extent and level of intellectual capital disclosure because they are the source of information which has been most widely adopted and well justified in previous related studies (Li, Mangana & Pike, 2012; Bozzolan, Favotto & Ricceri, 2003)

Table 1: Population and Sample

No.	Industry sector	Population		Sample	
		Frequency	Percent	Frequency	Percent
1	Agriculture and food	50	9.94	22	9.87
2	Consumer products	40	7.96	18	8.07
3	Industrial	86	17.10	38	17.04
4	Property and construction	149	29.62	66	29.60
5	Resources	38	7.55	17	7.62
6	Service	99	19.68	44	19.73
7	Technology	41	8.15	18	8.07
	Total	503	100.00	223	100.00

5.2. Measurement of Independent, Dependent and Control Variables

In this research, the dependent variables were intellectual capital disclosure, human capital disclosure, relational capital disclosure and structural capital disclosure. Content analysis was employed to quantify the number of words pertaining to the intellectual, human, relational and structural capital disclosures in the 2012–2014 annual reports. The means of collection of the intellectual capital disclosure data was adapted from Taliyang and Jusop (2011), Haji and Ghazali (2013) and Li, Pike, and Haniffa (2008). In addition, this research utilized a comprehensive checklist of voluntary intellectual capital disclosure items developed by Li, Pike, and Hannifa (2008).

The independent variables were the size of the board of directors, CEO duality, the proportion of non-managerial members of the board, the size of the audit committee, and the frequency of audit committee meetings (Haji & Ghazali, 2013; Li, Pike & Hannifa, 2008; Abeysekera, 2010). All of the independent variables related to the composition of the board of directors. In addition, the size of the company and the type of industry were adopted as control variables (Nurunnabi, Hossain & Hossian, 2011; Suttipun, 2015). The data pertaining to the independent and control variables were gleaned from the annual reports and the SET website (i.e. SETSMART) (SET, 2015). Table 2 sets out the dependent, independent and control variables.

Table 2: Measurement of Variables

Dependent variables:	Notation	Measurement
1. Intellectual capital disclosure	INTELL	Content analysis by word count
2. Human capital disclosure	HUMAN	Content analysis by word count
3. Relational capital disclosure	CUSTO	Content analysis by word count
4. Structural capital disclosure	ORGAN	Content analysis by word count
Independent variables:		
1. Size of board of directors	CSIZE	Number of board members
2. CEO duality	DUAL	1 = dual role, 0 = single role
3. Non-managerial board members	COMMIT	Proportion of non-managerial board members
4. Size of audit committee	CAUDIT	Number of audit committee members
5. Frequency of audit committee meetings	MEET	Frequency of audit committee meetings
Control variables:		
1. Size of company	FSIZE	Total assets
2. Industry type	INDUS	1 = High profile industry, 0 = otherwise

5.3 Data Analysis

To analyze the data, this research utilized descriptive analysis, correlation coefficients and multiple regression. Descriptive analysis was used to establish the extent and level of intellectual capital disclosure, expressed as means and standard deviations (SD). Multiple regression was used to test the relationship between board composition and the level of intellectual capital disclosure. There were four models used in this study: (A) intellectual capital disclosure, (B) human capital disclosure, (C) relational capital disclosure, and (D) structural capital disclosure.

Model A: Intellectual capital disclosure

INTELL = a + b1 CSIZE + b2 DUAL + b3 COMMIT + b4 CAUDIT + b5 MEET + b6 FSIZE + b7 INDUS + error

Model B: Human capital disclosure

HUMAN = a + b1 CSIZE + b2 DUAL + b3 COMMIT + b4 CAUDIT + b5 MEET + b6 FSIZE + b7 INDUS + error

Model C: Relational capital disclosure

CUSTO = a + b1 CSIZE + b2 DUAL + b3 COMMIT + b4 CAUDIT + b5 MEET + b6 FSIZE + b7 INDUS + error

Model D: Structural capital disclosure

ORGAN = a + b1 CSIZE + b2 DUAL + b3 COMMIT + b4 CAUDIT + b5 MEET + b6 FSIZE + b7 INDUS + error

6. Findings and Discussion

This section presents the findings in respect of the level of intellectual capital disclosure and the relationship between board composition and intellectual capital disclosure. Descriptive analysis, a correlation matrix and multiple regression were utilized for the analysis of the data.

Table 3: The Level of Intellectual Capital Disclosure (Number of Words)

Year	HUMAN		CUSTO		ORGAN		INTELL	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
2012	327.09	329.16	190.32	403.48	166.84	279.81	684.25	688.05
2013	459.93	494.64	213.65	386.62	187.01	258.75	860.60	824.20
2014	494.35	485.44	242.13	416.18	193.96	228.71	930.43	772.55
Average	427.12	408.19	215.37	384.44	182.60	216.90	825.10	701.46

Table 3 shows the level of intellectual capital disclosure (by the number of words) in the 2012–2014 annual reports of the 223 sampled firms. The findings indicated a rise in the level of intellectual capital disclosure from an average of 684.25 words in 2012 to 930.43 words in 2014. This is consistent with Suttipun's (2015) finding of an increase in voluntary sustainable development reporting by listed companies in Thailand between 2005 and 2011. This result relating to voluntary intellectual capital disclosure would tend to support legitimacy theory because although intellectual capital disclosure is not yet compulsory in Thailand, companies listed in the SET have to pay attention not only to shareholders, investors, and creditors, but also to the social expectations of, for instance, customers, labor, society, and the community in which they operate (Deegan, 2002). The result is also similar to previous studies in Asian contexts. For example, Nurunnabi, Hossain, and Hossian (2011) and Gan, Saleh, Abessi, and Huang (2013) found an increase in intellectual capital disclosure by listed companies in Bangladesh and in Malaysia respectively, during the periods studied.

However, this result disagrees with Welford's (2007) opinion that social and community power is lacking in the Asia-Pacific Region, and that stakeholders' interests cannot be protected as they should be. The increase in the level of intellectual capital disclosure in Thailand from 684.25 to 930.43 words between 2012 and 2014, despite such disclosures being only voluntary, suggests that an increasing number of Thai firms are utilizing intellectual capital disclosure as a way of fulfilling social expectations. Therefore, Thai regulators such as the SET, the FAP, and the Revenue Department should make intellectual capital disclosure compulsory for all Thai listed companies.

With regard to the extent of intellectual capital disclosure, the most common form was human capital disclosure (427.12 words on average), followed by relational capital (215.37 words) and structural capital disclosures (182.60 words), which represents a ratio of human, relational and structural capital disclosures of 2:1:0.8. In contrast, Li, Mangana, and Pike (2012) investigating intellectual capital disclosure in the United Kingdom found the ratio of human, relational, and structural capital disclosures to be 1:1:1, a difference which can probably be attributed to the mandatory nature of intellectual capital disclosure in the UK, as against Thailand, where the practice is voluntary.

Table 4: Descriptive Analysis (*n* = 223)

Variables	Min.	Max.	Mean	Standard Deviation
INTELL	37	4978	825.10	701.463
HUMAN	0	2341	427.12	408.197
CUSTO	0	3825	215.37	383.444
ORGAN	0	1835	182.61	216.907
CSIZE	6	21	10.67	2.565
COMMIT	10	93	59.8889	17.351
CAUDIT	2	5	3.16	.404
MEET	0	24	6.32	3.191
FSIZE	130059136	1.78E+12	36617682309	1.37890E+11
Variables	Frequency		Percent	
INDUS				
High-profile	77		34.50	
Low-profile	146		65.50	
DUAL				
Dual	33		14.80	
No-dual	190		85.20	

Table 4 shows the results of the descriptive analysis of all the variables under study. The average intellectual capital disclosure was 825.10 words, consisting of 427.12; 215.37 and 182.61 words for human, customer and structural capital disclosures, respectively. However, the minimum level of human, customer and structural capital disclosures made by some companies was zero (i.e. no words) in their annual reports. This shows that some

companies listed in the SET do not provide any intellectual capital information in their annual reports because such disclosures are not yet regulated by the relevant Thai authorities. The average board size and the average size of the audit committee were around 11 (10.67) and 4 (3.16) persons, respectively. The frequency of audit committee meetings was 6.32 times per year, which is twice the frequency recommended by the Financial Reporting Council (2008) of a minimum of three to four meetings a year, to allow sufficient time for the audit committee to undertake as full a discussion of issues as required. Almost three-fifths (59.88%) of the members of the boards of directors held no managerial position. Out of the 223 firms, a mere 33 companies (14.8%) had CEO duality during the study period. A total of 77 companies (34.5%) were from high-profile industries with the remaining 145 firms (65.5%) from low-profile industries.

Table 5 presents the correlation matrix testing the correlations among all the variables under study. Of the 11 variables (i.e. INTELL, HUMAN, CUSTO, ORGAN, CSIZE, DUAL, COMMIT, CAUDIT, MEET, FSIZE, INDUS), INTELL was significantly and positively correlated at or above the 0.05 level with HUMAN, CUSTO, ORGAN, COMMIT, MEET and INDUS. Moreover, HUMAN was significantly and positively correlated with INTELL, CUSTO, ORGAN, COMMIT, MEET and INDUS, while CUSTO was significantly and positively correlated with INTELL, HUMAN and CAUDIT, and in addition, ORGAN was significantly and positively correlated with INTELL and HUMAN all at or above the 0.05 level.

Table 5: Correlation Matrix

Variables	2	3	4	5	6	7	8	9	10	11
1.INTELL	.795**	.677**	.542**	.102	.035	.155*	-.071	.145*	.040	.135*
2.HUMAN	1	.194**	.346**	.075	.002	.170*	-.003	.142*	.015	.194**
3.CUSTO		1	.057	.052	.056	.063	-.137*	.126	.005	.004
4.ORGAN			1	.097	.018	.071	.017	.022	.111	.078
5.CSIZE				1	-.179*	.116	.243**	.259**	.216**	-.045
6.DUAL					1	-.145*	-.010	-.042	-.062	.010
7.COMMIT						1	-.065	.188**	.211**	-.137*
8.CAUDIT							1	.149*	-.006	.057
9.MEET								1	.280**	.102
10.FSIZE									1	-.096
11.INDUS										1

* Significant at 0.05 level, ** Significant at 0.01 level

Table 6 presents the four multiple regression models testing the relationships between board composition (CSIZE, DUAL, COMMIT, CAUDIT, MEET) and INTELL (model A), HUMAN (model B), CUSTO (model C) and ORGAN (model D), controlling for SIZE and INDUS. based on the F-values derived from the models used in this study, the results indicate that the data show good fit to the regression models which are therefore appropriate for judging which of the independent variables predict the dependent variables, at the 0.05 level in models A, C, and D, and at the 0.01 level in model B. Nevertheless it must be pointed out that the coefficients of determination for all the models are relatively low.

This study found that although the direction of the relationship between board size (CSIZE) and intellectual capital disclosure was positive for all the intellectual capital disclosure indices, none of the relationships were significant at the 0.05 level. This result, suggests that the size of the board of directors does not influence intellectual capital disclosure in the annual reports of companies listed in the SET. This is inconsistent with previous studies such as those of Haji and Ghazali (2013), Li, Pike, and Haniffa (2008), and Abeysekera (2010) which found a positive relationship between board size and intellectual capital disclosure. However, this result supports the finding of Gan, Saleh, Abeesi, and Huang (2013) who also failed to detect a significant relationship between board size and intellectual capital disclosure. A possible explanation for this result is that although the size of the board of directors may encourage intellectual capital disclosure as a public relations tool in order to attract quality human, relational, and structure capital the effect is not as important as other factors.

CEO duality (DUAL) also lacked any significant association with any of the intellectual capital disclosure indices. This result is consistent with the findings of Taliyang and Jusop (2011) who detected no significant relationship between CEO duality and the intellectual capital disclosure of listed companies in Malaysia. The result may be due to the lack of regulations requiring intellectual capital disclosure in developing countries, placing no pressure on CEO's functioning as top-management to make voluntary disclosures including intellectual capital disclosure.

The results for the influence of the proportion of non-managerial board members (COMMIT) show a positive association with intellectual capital disclosure at the 0.05 level, and with human capital disclosure at the 0.01 level. These results are consistent with those of Haniffa and Cooke (2005), Haji and Ghazali (2013), and Li, Pike, and Hannifa (2008) who all found a positive relationship between the proportion of non-managerial board members and intellectual capital disclosure. The results imply that non-managerial board members are able to exert greater influence over the management to adopt the practice of voluntary reporting, including making intellectual capital disclosures, since their remunerations are not tied to the firm's performance and they therefore have little incentive to conceal information (Haniffa & Cooke, 2005). Thus, the greater the proportion of non-managerial board members, the higher the level of intellectual capital disclosure made. However, the study did not find a significant relationship between the proportion of non-managerial board members and relational and structural capital disclosures. It is possible that human capital related topics are more likely to be regarded as relevant by non-managerial board members, and they may be more likely therefore to force top management to make human capital disclosures rather than those related to either relational and structural capital issues.

The results for the size of audit committee variable (CAUDIT) are negative and significant at the 0.05 level, but only in respect of relational capital disclosure. However, the relationships between audit committee size and the other intellectual capital disclosure indices (intellectual capital, human capital, and structural capital) were not significant. The results are inconsistent with those of Klein (2002) and Gan, Saleh, Abessi, and Huang (2013)

who found a positive relationship between the size of the audit committee and intellectual capital disclosure. On the other hand, the results of the present study support the findings of Taliyang and Jusop (2011) that there was no relationship between audit committee size and intellectual capital disclosure in Malaysian listed companies. The contexts of the present study and that of Taliyang and Jusop (2011) are similar because (1) in both Thailand and Malaysia, intellectual capital disclosure is a form of voluntary reporting, and (2) both countries are members of the ASEAN Economic Community representing a similar economic context.

Finally, the relationship between the frequency of audit committee meetings (MEET) and relational capital disclosure was positive and significant at the 0.05 level. However, the results show that the frequency of audit committee meetings was not significantly associated with intellectual, human, or structural capital disclosures. The positive relationship between the MEET variable and relational capital disclosure is consistent with prior studies, such as those of Taliyang and Jusop (2011) and Haji and Ghazali (2013) both of which found a positive relationship between the frequency of audit committee meetings and relational capital disclosure by Malaysian listed companies. According to Haji and Ghazali (2013), the reason for this relationship is the reduction of information asymmetries and agency costs. Therefore, the findings of the present study suggest that higher frequency audit committee meetings positively influence the disclosure of relational capital information.

Table 6: Multiple Regression Results

Variables	Model A	Model B	Model C	Model D
Intercept	.454	.816	1.806	.231
CSIZE	1.564	.890	1.095	1.401
DUAL	1.152	.523	1.119	.723
COMMIT	2.226*	2.709**	.556	1.108
CAUDIT	-1.623	-.455	-2.520*	-.117
MEET	1.362	1.208	2.028*	1.462
FSIZE	-.352	-.570	-.963	1.618
INDUS	2.296*	3.161**	-.114	1.675
R Square	.096	.109	.074	.051
Adjusted *R Square*	.050	.069	.033	.012
F-value	2.665*	3.001**	1.844*	1.307*

* Significant at 0.05 level, ** Significant at 0.01 level

In terms of the control variables, the study found no significant relationship between size of company (FSIZE) and any of the intellectual capital disclosure indices. This result is inconsistent with previous studies (e.g. Li, Pike & Hannifa, 2008; Mangena & Pike, 2005; Nurunnabi, Hossian & Hossian, 2011). On the other hand, there was a positive and significant relationship found between the type of industry variable (INDUS) and intellectual capital disclosure at the 0.05 level, and human capital disclosure at the 0.01 level. However, industry

type was not significantly associated with the other intellectual capital indices (relational and structural capital disclosures). The finding of positive relationships between FSIZE and intellectual and human capital disclosure is consistent with the findings of Abhayawansa and Azim (2014) and Chamnankij and Suttipun (2016) who found positive relationships between industry type and intellectual capital disclosure. It appears that, high-profile companies are subjected to greater public scrutiny and therefore provide more voluntary information reporting including intellectual capital disclosure than do companies in low profile sectors.

Table 7 summarizes the hypothesis test results. Out of the seven hypotheses that tested the relationship between board composition and intellectual capital disclosure, controlling for company size and industry type, only two hypotheses (H3, H7) were accepted whereas the other five hypotheses (H1, H2, H4, H5, H6) were rejected.

Table 7: Summary of Hypothesis Test Results

Hypothesis	Independent/control variable	Predicted sign	Result
H1	CSIZE	Positive	Rejected
H2	DUAL	Negative	Rejected
H3	COMMIT	Positive	Accepted
H4	CAUDIT	Positive	Rejected
H5	MEET	Positive	Rejected
H6	FSIZE	Positive	Rejected
H7	INDUS	Positive	Accepted

7. Conclusions and Recommendations

This empirical research has revealed an increase in intellectual capital disclosure in the 2012–2014 annual reports of SET-listed companies, with an average of 825.10 words for the period of three years. Specifically, human capital disclosure was the most common intellectual disclosure item among the sampled companies, followed by relational and structural capital disclosures. In addition, the findings indicated a significantly positive relationships between the proportion of non-managerial board members and the type of industry with the level of intellectual capital disclosure.

This study is the first that has investigated the level of intellectual capital disclosure and the association between the board composition and such disclosure in the Thai context. The research findings reported herein therefore cast light on the intellectual capital disclosure practices current in Thailand with regard to the extent of disclosure. In addition, it is believed that the findings will contribute to a deeper understanding of the links between board composition and intellectual capital disclosure in developing countries which can be compared to findings relating to developed countries where most prior studies have been conducted. Furthermore, it is hoped that this empirical research will lead to a necessary revision of corporate governance rules in terms of board composition.

This research, however, entails certain limitations. The first limitation is the sole dependence on annual reports as the source of data for intellectual capital disclosure despite the existence of other sources, e.g. websites, stand-alone reports and corporate letters. Second, the study period of two years might be regarded as being too short for a longitudinal study, the typical length of which would be around five to ten years. The final limitation relates to the utilization of the five particular independent variables to represent board composition in investigating their association with intellectual capital disclosure in annual reports. The fact is that there are other proxies available to represent board composition which could influence the decision to make intellectual capital disclosure, such as the audit committee background, proportion of foreign board members and the size of the independent audit committee.

To address these limitations, future research should cover a longer study period and take into account other types of corporate communication. Moreover, future studies should include other proxies representing board composition that could influence the decision to make intellectual capital disclosures.

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The first steps towards integrated reporting in Thailand

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Abstract

This study aimed to (1) investigate the extent, pattern, and level of integrated reporting in the annual reports of companies listed in the Stock Exchange of Thailand between 2012 and 2015, (2) test if there were significant differences in the level of integrated reporting in the annual reports of companies listed in the Stock Exchange of Thailand during the period being studied, and (3) examine the relationship between corporate governance and the level of integrated reporting in the annual reports of companies listed in the Stock Exchange of Thailand. Legitimacy theory and agency theory were used to explain the phenomena observed in this study. By simple random sampling, 150 firms from the Stock Exchange of Thailand were selected as the sample in this study. Content analysis by word count was used to quantify the extent, pattern, and level of integrated reporting in Thai corporate annual reports. Descriptive analysis, paired sample t-tests, and multiple regression were used to analyze the data collected in this study. The results indicate that the companies provided an average of 603.59 words of integrated reporting in their annual reports during the period being studied. 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 with significant increases in all three periods studied (2012-2013, 2013-2014, and 2014- 2015). There were significant positive relationships between the level of integrated reporting and each of, institution-owned firms, board size and companies given CSR awards. This was the first study examining the relationship between corporate governance and integrated reporting by listed companies in Thailand.

Key words: 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 (i.e. corporate social responsibility reports, environmental reports, and sustainable development 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 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), intellectual capital reporting (Edvinsson, 1997, Mouritsen et al., 2001), 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, some leading companies have adopted integrated reporting as their preferred manner of reporting their performance using a single report (Frias-Aceituno et al., 2014).

Integrated reporting is a fairly new reporting framework, but 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 Villier et al., 2014, Cheng et al., 2014). Most companies 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 Maroun, 2012, Steyn, 2014, Rensburg and Botha, 2014), European countries (Frias-Aceituno et al., 2014, Garcia-Banau et al., 2013), Australia (Higgins et al., 2014, Stubbs and Higgins, 2014), and New Zealand (Jensen and Berg, 2012). 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 not as well established as it is in more developed economies. 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. Moreover, there has been no study of the relationship between corporate governance and integrated reporting. Therefore, this study aimed to fill this lacuna in the reporting literature.

To investigate the research problems above, this study had three objectives which were **(**1) to investigate the extent, pattern, and level of integrated reporting in the annual reports of companies listed in the Stock Exchange of Thailand (SET) during 2012 to 2015, (2) to test the different levels of integrated reporting in annual reports of companies listed in the SET during the period being studied, and (3) to examine the relationship between corporate governance and the level of integrated reporting in the annual reports of companies listed in the SET. There were three research questions: (1) what is the extent, pattern, and level of integrated reporting in the annual reports of companies listed in the SET between 2012 and 2015? (2) are there differences in the level of integrated reporting in the annual reports of companies listed in the SET during the period being studied? If so how are they different? And (3) is there a relationship between corporate governance and the level of integrated reporting in the annual reports of companies listed in the SET?

The study provides some contributions to knowledge in the field. It will develop knowledge and understanding about Thailand which represents a non-Western perspective. The study will also enhance understanding of the relationship between corporate governance and integrated reporting, particularly in a developing country. Further, The study will make information available to scholars, and researchers about integrated reporting in developing countries which will supplement the knowledge already available about developed countries. In addition, it will contribute useful knowledge to investors, shareholders, and creditors who consider integrated reporting when making investment decisions and may lead to improvements in the Thai regulations relating to integrated reporting with benefits for people, the planet, and profits. Moreover, this study will contribute legal and management scholarship by determining the impact that integrated reporting has on corporate financial performance, and finally the study may motivate Thai listed companies to adopt integrated reporting in their annual reports.

The organization of the remainder of this article is as follows: Section 2 describes the theoretical perspectives adopted in conducting the research while section 3 deals with the motivation for integrated reporting. Section 4 reviews relevant literature and develops the

research hypotheses. Section 6 details the study methodology, while section 7 presents the findings and discussion of them. Concluding remarks and recommendations are provided in section 8.

2. Theoretical perspectives

Several theories have been used to explain the concept of voluntary reporting and the relationship between corporate governance and voluntary reporting, such as legitimacy theory (Emeseh and Songi, 2014, Gray et al., 1995, Brown and Deegan, 1998, Ali, 2015), stakeholder theory (Deegan, 2001, Kulsirikun and Sherer, 2004, Suttipun, 2015), agency theory (Frias-Aceituno et al., 2014), signaling theory (Lang and Lundholm, 1996, Brown et al., 2009), and dependency theory (Amran and Devi, 2008). This study does not, however, adopt dependency theory since it cannot explain voluntary integrated reporting by the companies listed in the SET because those companies are first movers, and do not depend on or follow the actions of other companies outside of the SET (Naklerd and Suttipun, 2016). On the other hand, stakeholder theory has many similar ideas to legitimacy theory, and this study therefore adopted legitimacy theory as one of its theoretical perspectives. In adition, the study also adopted the perspectives offered by signaling theory, and agency theory, because of their explanatory power and applicability to the Thai setting, where integrated reporting is voluntary and corporate stakeholders are largely at a disadvantage relative to those in advanced economies.

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 motivated by societal expectations, between 2012 and 2015, while signaling theory was used to explain the pattern of integrated reporting in annual reports during the period being studied, and 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**.** In this study, therefore, legitimacy theory is used to explain the extent and level of integrated reporting in the annual reports of the SET-listed companies motivated by societal expectations, between 2012 and 2015.

2.2 Signaling theory

To explain the pattern of integrated reporting in annual reports during the period being studied, this work draws on signaling theory, which posits that higher performing companies tend to readily report more information to their stakeholders (Lang and Lundholm, 1996). According to signaling theory, information disclosures are signals conveyed to the capital markets to reduce information asymmetry, optimize financing costs, and increase the value of the corporation (Frias-Aceituno et al., 2014). Moreover, these effects can contribute positively to economic growth, job creation, and quality of life, as the lower cost of capital resulting would enable the company to raise its level of investment (Brown et al., 2009). For example, in today's world, companies operate in a competitive environment and experience challenges from both internal and external impacts such as limitations on the availability of capital and natural resources, increases in the number of competitors and changes in customers' behavior. Therefore, if companies are known to disclose more information about their actions and activities through voluntary reporting, they are likely to value and benefit from their stakeholders through meeting their stakeholders' expectations and earning their trust. In this study, signaling theory was used to explain the changes in the level of integrated reporting between 2012 and 2015

2.3 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. 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. Therefore, agency theory can explain the relationship between corporate governance and integrated reporting.

3. The motivation for integrated reporting

Integrated reporting forms the latest step in the evolution of corporate reporting which in earlier developments extended the provision of information to corporate stakeholders (Eccles and Krzus, 2011). Previous initiatives in reporting have been focused on providing a broader range of non-financial information than purely traditional financial reports to only shareholders and investors, and include Triple Bottom Line reporting, corporate social responsibility reporting, and reporting related to the sufficiency economy philosophy, sustainable development, and social and environmental accounting. According to a survey conducted by KPMG (2011), such reports have been produced by an increasing number of corporations since the 1980's and their survey provided insights into national, international, and industry trends in social and environmental reporting among large corporations since 1993.

Although a review of the literature on Triple Bottom Line, corporate social responsibility, sufficiency economy philosophy, sustainable development, and social and environmental accounting disclosures has shown that there are increasing numbers of companies around the world providing non-financial information on their reports, the growth in terms of the quantity of disclosures does not correlate with higher standards of quality in the information provided to stakeholders. For example, in the context of widespread regulation, there is strong motivation for corporations to utilize such reporting as legitimizing strategies, and for reputation management (Gray et al., 1995). Previous studies have noted the inadequacy of much existing non-financial information disclosure, and it has been suggested that this reporting has failed in its purpose of providing useful information to stakeholders to drive improvements in corporate social and environmental behavior (Gray et al., 1995).

The development of integrated reporting has been given impetus by the global financial crisis and is driven by the perceived need for an improved method of reporting that incorporates the range of financial and non-financial information necessary for effective decision-making and risk management in the current business, and financial environment (Abeysekera, 2010). There is also a growing awareness on the part of both corporates and stakeholders of the interconnectedness between financial stability and environmental and social sustainability, the need for greater integration between financial and non-financial information, and the reporting of present and future-oriented data in reports to stakeholders.

Integrated reporting has been defined as a concise communication about how a corporate's strategy, governance, performance, and prospects lead to the creation of value over the short, medium, and long terms (IIRC, 2012). Integrated reporting will integrate economic, social, and environmental information into one report for corporate stakeholders in a concise, clearly expressed form, in a consistent and comparable format (Eccles and Krzus,

2010). KPMG (2011) described integrated reporting as a report providing context to financial and non-financial information and goals. It connects strategies with corporate commitment to the long-term stewardship of material economic, societal, and environmental issues (IIRC, 2012).

Integrated reporting was developed by the International Integrated Reporting Council (IIRC) which was formed in 2010 from the Global Reporting Initiative (GRI) and the Prince of Wales Accounting for Sustainability Project (IIRC, 2012). Committees of the IIRC consist of regulators, corporations, investors, shareholders, standard setters, accounting professionals, and NGOs. The main aim of integrated reporting is to create corporate reporting of financial information, non-financial information, and goals and the duties of the IIRC include setting the framework and guidelines for integrated reporting.

In 2012, the IIRC (2012) launched the International Integrated Reporting Framework Outline and the first version of the Integrated Reporting Framework (1.0) had published since 2013. The Prototype of the international framework sets out definitions of the key concepts and principles which are intended to underpin the content and the description of integrated reporting. Even though, companies may consider integrated reporting to be similar to sustainable development or triple bottom line reporting, the concept of integrated reporting is independent of, and different to both of those forms of reporting (De Villiers et al., 2014, Cheng et al., 2014).

In integrated reporting, there are five guiding principles to the structure of reports, six content elements, and six corporate capitals. The guiding principles of integrated report structure consist of strategic focus, information connectivity, future orientation, responsiveness and stakeholder inclusiveness, and conciseness, reliability, and materiality. The six content elements are: organizational overview and business model, operating context including risks and opportunities, strategic objectives and strategies to achieve those objectives, governance and remuneration, performance, and future outlook. The six corporate capitals which integrated reporting must include extend beyond purely financial capital, to cover manufactured, human, intellectual, natural, and societal and relationship capitals in addition.

The benefits to corporations of adopting integrated reporting include the facilitation of seeking new business opportunities, safeguarding corporate reputation, maximizing competitive advantage, and mitigating operational risks (IIRC, 2012).

Companies listed on the Johannesburg Stock Exchange in South Africa were the first group be required to incorporate mandatory integrated reporting into their annual reports and this provision has been in force since 2010 (Integrated Reporting Committee of South Africa, 2011). Further, in 2011, the concept of integrated reporting was launched as a pilot program in 23 countries across six continents (North and South America, Europe, Australia, Asia, Africa) (IIRC, 2012).

4. Literature review

Because integrated reporting was only launched in 2010, there have been few studies to date (Churet and Eccles, 2014, Frias-Aceituno et al., 2014, Garcia-Benau et al., 2013, Jensen and

Berg, 2012, Solomon and Maroun, 2012, Steyn, 2014, Rensburg and Botha, 2014). Frias-Aceituno et al. (2014) tested the corporate characteristics influencing the integrated sustainability and financial reporting of 1,590 international companies around the world during the period 2008-2010. Logistic regression and panel data analysis were used to analyze the data in their study. Within the perspectives of agency theory, signaling theory, political costs theory, and proprietary costs theory, their study found that there was a relationship between industry type and the adoption of integrated reporting. Moreover, they found that large companies with higher profitability were more likely to adopt integrated reporting than small companies with lower profitability because they are more politically visible and face higher agency costs.

Garcia-Benau et al. (2013) found that companies in cultural systems with stronger collectivist and feminist values were more likely to adopt integrated reporting which emphasizes good corporate governance, ethics and offers solutions to sustainability issues. De Villiers et al. (2014) investigated the extent and nature of integrated reporting, and tested for a relationship between corporate characteristics consisting of size, industry, profitability, country, and auditor, and the level of integrated reporting of 58 companies appearing in the IIRC database in 2013. They found that most companies address financial, human, natural, and societal capital in their annual reports, while manufactured and intellectual capital are not well addressed. The results indicated that there is a negative relationship between certain industry types and the level of integrated reporting, but no other corporate factors produced significant relationships. Jensen and Berg (2012) compared the qualitative characteristics of companies that produce reports based on either traditional sustainable development reporting or integrated reporting, and tested for a relationship between national institutional framework factors (i.e. the political system, the financial system, education and the labor system, the cultural system, and the economic system, and reporting on sustainable development and integrated reporting). Based on data collected from 309 leading world companies, the results showed that different disclosures are made in sustainability reporting than in integrated reporting. Moreover, investor and employment protection laws, the intensity of market orientation and ownership concentration, the level of economic development, the degree of national corporate responsibility, and the value of the country of origin all have an effect on integrated reporting. This is because integrated reporting is not motivated by market demand, but involves corporates attempting to appeal to stakeholders. Jensen and Berg also found that integrated reporting was more common in developed countries than in developing countries. Churet and Eccles (2014) tested the relationship between integrated reporting and financial performance, but found no significant relationship between the level of integrated reporting and performance.

However, no prior studies have investigated integrated reporting in developing countries especially those in Asia. There has been no longitudinal study of integrated reporting and there is, therefore, a lack of knowledge about the pattern of reporting. Moreover, there has been no study of the relationship between corporate governance and integrated reporting. Therefore, this study aimed to deal with these issues by answering the research questions set out in section 1 above.

5. Hypothesis development

Although, there have been no previous studies testing the relationship between corporate governance and integrated reporting, 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 six hypotheses tested in this study which fall into two main groups based on aspects of corporate governance, ownership structure and board composition.

5.1 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 (Haji and Ghazali, 2013). Moreover, in a family-owned business, there is no problem about conflicts of interest between the principles and agents because they come from the same family. Previous literature, therefore, indicates 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; Haji 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. 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), and Tagesson *et al.* (2009) 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) and Secci (2005) 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: Government-owned companies are more likely to provide integrated reporting than privately owned companies.

El-Gazzar (1998) found that a higher proportion of institutional ownership of companies positively affected the level of corporate information reporting. This is because institutions play an important role as stakeholders, as shareholders, investors, creditors, as well as through society and the community. Therefore, companies need to fulfill the expectations placed on them including financial and non-financial information reporting. 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. .

5.2 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 (Haji and Ghazali, 2013; Abeysekera, 2010; Cerbioni and Parbonetti, 2007). Based on legitimacy theory, a larger board tends to increase both the amount and the variety of societal expectations for information about corporate decision making (Abeysekera, 2010). A larger board is also able to improve the monitoring of corporate actions and activities in the interests of society (Dalton and Dalton, 2005 because both financial and non-financial information reporting can reduce the agency costs between owners and top-management and thereby raise the likelihood of the board opting for the practice of integrated reporting. 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), Haji 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). On the other hand, 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 plays an influencing role in decisions to make both financial and non-financial information disclosures to fulfill a monitoring function (Haji & 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.

5.3 Control variable

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.

6. 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 sample (Table 1). Despite the availability of information through other sources, e.g. websites, stand-alone reports and analyst presentations, 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). Therefore, this study drew on 600 annual reports (150 firms for four years) during the period being studied as the source of data.

To measure the variables used in this study, there were six independent variables, one dependent variable, and one control variable. 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; Hackston and Milne, 1996). 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). Based on the limitations imposed by Thai orthography, the study could not use sentence count because Thai is not written with full stops delineating sentences so the method of sentence count could not be used. Moreover, there are no regulations relating to the font or paper size to be employed in producing annual corporate reports. Therefore, line or page counts were also not appropriate for use in this study. 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). First, financial capital reporting is defined as disclosures about the pool of corporate funds. Second, manufactured capital reporting is defined as disclosures about physical objects available for production and provision. Third, intellectual capital reporting relates to the company's knowledge base intangible asset. Fourth, human capital reporting is defined as disclosures about the quality of the competency of and innovation from the corporate's human resources. Fifth, social capital reporting is the sharing of information between companies and their stakeholders. Sixth, environmental capital reporting is defined as disclosures about all renewable and non-renewable environmental resources. Companies need to integrate the six capitals into their business models and strategic plans In order to achieve corporate sustainable development (Eccles and Krzus, 2010).

Table 1: Population and sample

	Industry	Population		Sample	
		Number	Percent	Number	Percent
1	Agricultural and food	50	9.04	15	10
2	Financial	56	10.13	18	12
3	Industrial	85	15.37	12	8
4	Property and construction	147	26.58	31	20.67
5	Natural resources	37	6.69	21	14
6	Service	98	17.72	26	17.33
7	Consumer products	40	7.23	10	6.67
8	Technology	40	7.23	17	11.33
	Total	553	100	150	100

The six independent variables were assessed based on the measures set out in table 2. 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, PID, and CEO duality) (See Table 2). Although there have been no previous studies investigating the relationship between corporate governance and integrated reporting, 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 (Garcia-Benau et al., 2013, 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 a control variable (See Table 2). All the independent and control variables used in this study were sourced from company profiles appearing on the website of the SET (www.set.org.th).

Table 2: Variable measurement

Variable	Type	Notation	Measurement
Integrated reporting	DV	IR	Content analysis by word count
Family-owned firms	IDV	FAMOWN	Percentage of common stock owned by family
Government-owned firms	IDV	GOVOWN	Percentage of common stock owned by government
Institution-owned firms	IDV	INSTITU	Percentage of common stock owned by financial institutions
Size of board	IDV	BSIZE	Number of board members
Independent board members	IDV	PID	Proportion of independent board members
CEO duality	IDV	DUAL	Dummy variable of 1 for CEO duality, and 0 for otherwise
CSR award firms	CV	CSRAW	Dummy variable of 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 (2012-2015), and multiple regression was used to test for possible relationships between corporate governance and the level of integrated reporting in annual reports. For the multiple regression, two models were used in this study as follows:

$$IR = a + b1FAMOWN + b2GOVOWN + b3INSTITU + b4BSIZE + b5PID + b6DUAL + error \quad \text{as model 1}$$

$$IR = a + b1FAMOWN + b2GOVOWN + b3INSTITU + b4BSIZE + b5PID + b6DUAL + b7CSRAW + error \quad \text{as model 2}$$

7. Findings and discussion

Based on the annual reports of the 150 companies sampled in this study, all the companies provided integrated reporting between 2012 and 2015. By descriptive analysis (See Table 3), 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 content, extent, and level of integrated reporting in the annual reports found by this study are therefore supported by legitimacy theory 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. However, some of the companies sampled in the study did not 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.

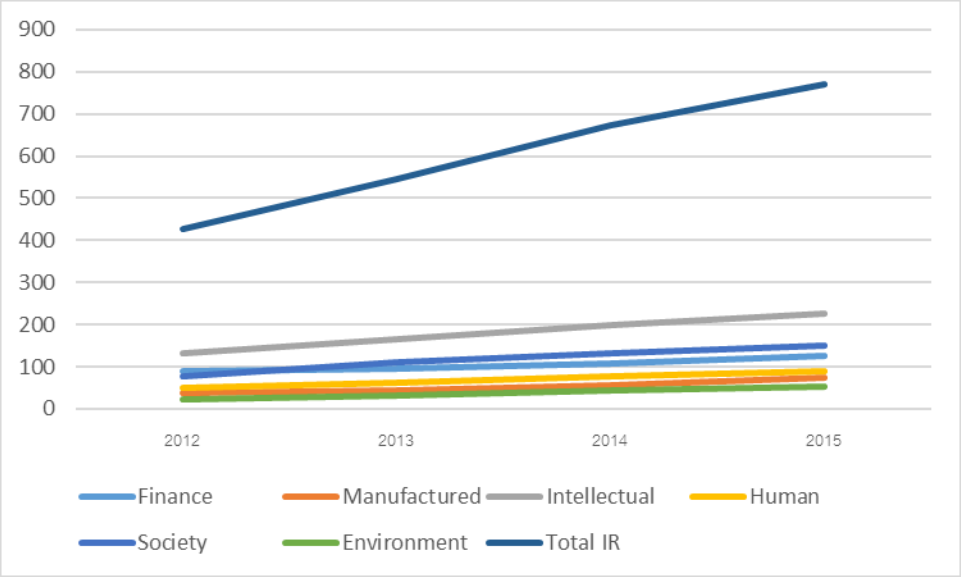
Table 3: Extent and pattern of integrated reporting

Capital	2012		2013		2014		2015		Average words	
	M	SD	M	SD	M	SD	M	SD	M	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	359.39	544.29	449.62	671.98	547.19	771.49	701.22	603.59	503.59

Figure 1 indicates a pattern of increased integrated reporting from an average of 426.63 words in 2012 to an average of 544.29 words in 2013, an average of 671.98 words in

2014, and an average of 771.49 words in 2015. This increase most likely occurred because companies have been forced by societal expectations to provide more integrated reporting and the results of this study are consistent with the prior study of Suttipun (2015) who found an increase in sustainable development reporting by Thai listed companies during the period 2005 to 2012. The result would tend to support legitimacy theory because although integrated reporting is a form of voluntary reporting and is not yet compulsory in Thailand, companies listed in the SET have to pay attention not only to shareholders, investors, and creditors, but also to the expectations of, for instance, customers, labor, society, and the community in which they operate (Deegan, 2002).

Figure 1: The pattern of integrated reporting between 2012 and 2015



The study considered integrated reporting separately within the six capitals as well as the total words of integrated reporting and found that in every case, year on year the average words devoted to each capital and the total words increased during the period being studied. Moreover, the most common type of integrated reporting related to intellectual capital which increased from an average of 133.39 words in 2012 to an average of 226.10 words in 2015, while environmental capital reporting was the least common type of integrated reporting during the period being studied growing from an average of 23.39 words in 2012 to an average of 52.88 words in 2015. Surprisingly, although financial capital reporting was higher than social capital reporting in 2012, social capital reporting had overtaken financial capital reporting by 2013. This result was consistent with that of Suttipun (2015) who found that between 2005 and 2012, the most common type of sustainability reporting related to the financial perspective following by the social and environmental perspectives. Signaling theory can explain why there was an increase in the level of integrated reporting because if companies have a reputation for reporting more information about their actions and activities, they will obtain more benefit and value from their stakeholders whose expectations they meet and whose trust they gain. Moreover, companies which provide more information to their stakeholders in order to decrease information asymmetry, are likely to optimize their financing costs, and thus improve their firm value (Frias-Aceituno et al., 2014). Therefore, increasing corporate integrated reporting can bring benefits and value to companies.

Table 4: Paired sample t-tests of integrated reporting during the period being studied

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**

** significant at $p<0.001$

To answer the second research question, paired sample t-tests were used in this study (See Table 4). 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 ('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 Kunsirikun 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 result supports signaling theory's concept that 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 5 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 14.65, 2.75 and 7.10 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 5 also shows the correlations between the eight variables consisting of one dependent variable, six independent variables, and one control variable. 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. Based on the correlation coefficients between the variables used in this study, IR had a significant positive correlation with BSIZE and CSRAW at the 0.01 level, and GOVOWN and INSTITU were significantly correlated at the 0.05 level. On the other hand, IR had a significant negative correlation with FAMOWN and PID at the 0.05 level

while the correlation between IR and DUAL although positive, was not significant at the 0.05 level.

Table 5: Correlation matrix

Variable	IR	FAMOWN	GOVOWN	INSTITU	BSIZE	PID	DUAL	CSRAW
Mean	603.59	14.65	2.75	7.10	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
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

** significant at p<0.01, * significant at p<0.05

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 6 in Model 1 the variable CSRAW was used as a control variable so its effect was held constant, while in model 2 the effect of CSRAW was measured along with the effect of the other six independent variables. The result for model 1 show that within the six independent variables, there were significant positive relationships between the level of integrated reporting in annual reports and INSTITU (at the 0.05 level) and BSIZE (at the 0.01 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. The results from model 2 were the same as those for model 1 but additionally found a significant positive correlation between CSRAW and the level of integrated reporting at the 0.05 level.

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 institutions play many stakeholder roles in respect of the companies they finance notably as shareholders, investors and creditors, as well as in their positions within society and the community. Therefore, companies need to serve the expectations of institutions including the reporting of both financial and non-financial information. The study's results were also similar to those of Haji 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 societal expectations about the availability of information relating to corporate decision making (Abeysekera, 2010). In addition, a larger committee is also able to improve the monitoring of corporate actions and activities in the interests of society (Dalton and Dalton, 2005). Moreover, both financial and non-financial information reporting can reduce agency costs between owners and top-management and thereby raise the likelihood of the board opting for the practice of integrated reporting.

The study also 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). The CSR award in Thailand is 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. Based on legitimacy theory, CSR award winners would be more likely to attempt to meet societal expectations for information disclosure through sustainability reporting (Deegan and Gordon, 1998).

Table 6: Multiple regression for model 1 and 2

Variable	Model 1		Model 2	
	B	t (sig)	B	t (sig)
Constant	851.414	1.621 (.108)	1324.702	2.314 (.022*)
FAMOWN	-2.612	-1.135 (.259)	-2.217	-.971 (.334)
GOVOWN	5.652	1.455 (.148)	2.674	.648 (.518)
INSTITU	6.991	2.121 (.036*)	6.824	2.095 (.038*)
BSIZE	50.798	2.589 (.005**)	43.238	2.405 (.018*)
PID	-4.781	-.875 (.383)	-4.721	-.874 (.384)
DUAL	370.987	1.682 (.095)	372.446	1.709 (.090)
CSRAW	-		216.731	1.961 (.050*)
R Squared	.203		.228	
Adjusted R Squared	.162		.182	
F-value	4.998 (.000**)		4.936 (.000**)	

** significant at p<0.01, * significant at p<0.05

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, 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 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 CEO's to make voluntary reports including integrated reporting. This study also failed to find a significant relationship between GOVOWN and the level of integrated reporting, which is similar to Suttipun (2012) who found no correlation between government ownership and triple bottom line reporting. This might be because society and stakeholders in Thailand have the same expectations of government-owned companies as those they have for privately owned companies.

Therefore, based on the two models, the study finds support for the third and fourth hypotheses, while rejecting the first, second, fifth, and sixth hypotheses. The optimal multiple regression models can be written as follows:

IR = 851.41 – 2.612FAMOWN + 5.652GOVOWN + 6.991INSTITU + 50.798BSIZE – 4.781PID + 370.987DUAL + error Model 1

IR = 1324.70 – 2.217FAMOWN + 2.674GOVOWN + 6.824INSTITU + 43.238BSIZE – 4.721PID + 372.446DUAL + 216.731CSRAW + error Model 2

8. Summary and suggestions

This study set out to answer three research questions, which were (1) what is the extent, pattern, and level of integrated reporting in the annual reports of companies listed in the SET between 2012 and 2015? (2) are there differences in the level of integrated reporting in the annual reports of companies listed in the SET during the period being studied? If so how are they different? And (3) is there a relationship between corporate governance and the level of integrated reporting in the annual reports of companies listed in the SET? 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 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 findings of this study are able to support legitimacy theory and signaling theory in that even though integrated reporting is still voluntary by listed companies in Thailand, societal expectations can force companies to incorporate integrated reporting into their annual reports. The study's results also support agency theory in that the reason for the relationship between corporate governance and integrated reporting is in part a result of measures adopted to reduce information asymmetry and conflicts of interest between owners and their managements. 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. Third, the study collected only the quantity of integrated reporting, but did not consider the quality of the reporting. Therefore, there is no guarantee that the greater level of integrated reporting undertaken by Thai listed companies

can be classified as constituting better reporting by those companies. 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. Finally, the quality of integrated reporting should also be considered in a future study.

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An effect of integrated reporting on corporate financial performance: an evidence of Thailand

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Abstract

The main objectives of this study were to (1) investigate the extent and level of integrated reporting in annual reports of listed companies from the Stock Exchange of Thailand (SET), (2) to test the different level of integrated reporting in annual reports between SET100 companies and Non-SET100 companies, and between Corporate Social Responsibility (CSR) award companies and Non-CSR award companies, and (3) to test the effect of integrated reporting on corporate financial performance of listed companies from the SET. By simple random sampling, 150 listed companies from the SET were used as samples in the study. Content analysis by word count was used to quantify the extent and level of integrated reporting in Thai corporate annual reports during 2012 to 2015. Descriptive analysis, independent samples t-test, and multiple regression were used to analysis the data used in this study. As the results, the companies provided 603.59 average words of integrated reporting in their annual reporting during period being study. Intellectual capital reporting was the most common reporting of Thai listed companies, while environmental capital reporting was the less common reporting of integrated reporting. The companies in technology industry disclosed the highest level of integrated reporting, but the companies in property and construction industry provided the lowest level of reporting. There were significant differences of level of integrated reporting between SET100 companies and Non-SET100 companies, as well was CSR award companies and Non-CSR award companies. To test the effect of integrated reporting on financial performance, the study found that manufactured capital reporting and CSR award companies had positively affected to the level of integrated reporting, while environmental capital reporting had negatively affected to the level of integrated reporting.

Key words: Integrated reporting, financial performance, annual reports, and Thailand

1. Introduction

In today's world, only economic perspective cannot be warranty to corporate sustainability, but it need to be included the social and environmental perspectives. Therefore, corporate actions and activities tend to be balanced between economic, social, and environmental perspectives. The information reporting have also been changed from the traditional financial information reporting to support economic view to non-financial information reporting to encourage the social and environmental views. But, the companies cannot provide only one side of information reporting so that there are some measurement tools providing and combining both financial and non-financial information reporting such as triple bottom line

reporting, sustainable development reporting, and sufficiency economy philosophy reporting. However, there are some limitation by using these measurement tools. For example, all tools are still voluntary reporting where the companies will pick up only the benefit information to report to their stakeholders. Moreover, it is also hard to compare between companies especially non-financial information reporting because the guidelines of each measurement tool use different indicators to measure and disclose the corporate information. Therefore, the new measurement tool namely the integrated reporting (IR) can solve the earlier problems of using both financial and non-financial information reporting including the awareness of a long-term sustainable development perspective, an increase of comparability on global corporations, and a reduction of corporate reputational risk.

The IR is a combination reporting launched by the International Integrated Reporting Committee (IIRC) since 2010 (IIRC, 2012). The IR has worked as corporate management and measurement tool to combine financial and non-financial performance. The IR is used to codify corporate financial and non-financial information quite logical. The outlines of the IR are included strategic focus, connectivity of information, future orientation, responsiveness and stakeholders, and governance and remuneration. The IR also provides the broader explanation of corporate performance than the traditional approach such as the traditional financial annual report. Therefore, some global corporations have started to report their performance using the IR as their annual reports (Frias-Aceituno et al. 2014).

However, although the IR has been increased rapidly (See IIRC, 2013), it is unclear why corporations adopt it into their reporting. Moreover, though important initiatives are being taken, the IR is currently produced by just few companies at the vanguard of the process (Frias-Aceituno et al. 2014). The IR framework will push corporations out of their comfort zone by forcing discussions away from what is known and real. Compared with the traditional financial information reporting, systems for non-financial information reporting (such as intellectual, human, social, and environmental) are still less developed and unknown. There is very little published scholarly work focused on an empirical analysis of the content and form of IR. Those prior studies of the IR are indicated only in developed countries such as USA, Australia, New Zealand, South Africa, and the European countries (Jensen and Berg, 2012; Garcia-Benau et al., 2013; Higgin et al., 2014; Steyn, 2014), but none is in emerging countries including Thailand where do not have the same degree of sustainability and regulation as well as developed markets. Moreover, the IR in the early stages is more on soft (general) measures, but less for hard (specific) measures.

Moreover, there were a little prior studies on the relationship between the IR and corporate performance (See Frias-Aceituno et al., 2014, Wild and Van Staden, 2013, Churet and Eccles, 2014). However, the results of relationship were mixed. The reasons of mixed results are because the IR principle may provide two different influences on the corporate performance. On one hand, having the IR through their companies can serve their stakeholder demands, therefore, when companies can make their stakeholders' satisfaction, the stakeholders will encourage the companies including the greater performance. On the other hand, the IR may cost the companies to spend lots of money to invest for having the IR so that it can link to the lower performance of companies.

From the research problems above, the study aims (1) to investigate the extent and level of integrated reporting in annual reports of listed companies from the Stock Exchange

of Thailand, (2) to test the different level of integrated reporting in annual reports between SET100 companies and Non-SET100 companies, and between CSR award companies and Non-CSR award companies, and (3) to test the effect of integrated reporting on corporate financial performance of listed companies from the Stock Exchange of Thailand. Therefore, there are three main questions in this study: (1) what is the extent and level of integrated reporting in annual reports of listed companies from the Stock Exchange of Thailand? (2) is there different level of integrated reporting in annual reports of listed companies from the Stock Exchange of Thailand reports between SET100 companies and Non-SET100 companies, and between CSR award companies and Non-CSR award companies? If so how? and (3) is there the effect of integrated reporting on corporate financial performance of listed companies from the Stock Exchange of Thailand?

The study provided some contributes expected to the literature relating to integrated reporting in the following ways. Firstly, the study will enhance understanding of the relationship between the IR and corporate performance in developing country as well as developed countries. Secondly, it also contributes useful knowledge to investors, shareholders, and creditors who consider the IR when making investment decisions. The study may lead to improvements in the working of Thai integrated reporting regulations. This study may also contribute legal and management scholarship by determining the impact that integrated reporting has on corporate financial performance. The study may motivate Thai listed companies to provide the IR in their annual reports. The study will provide useful insights into the future direction and impact of the IR as well as potential costs and benefits of the IR.

The organization of the remainder of this article is as follows: Section 2 describes the theories adopted in conducting the research, while section 3 deals with the motivation for the IR. Section 4 reviews relevant literature and hypotheses development. Section 5 details the study method, while section 6 presents the findings and discussion. Summaries and recommendations are provided in section 7.

2. Theories

Although the previous related studies used some theories to explain the IR such as political costs, proprietary costs, legitimacy, signaling, and institutional theories (Jensen and Berg, 2012; Wild and Van Staden, 2013; De Villiers et al., 2014), this study picks up two main theories consisting of stakeholder and agency theories to explain the objectives of study: to study extent, nature, and level of IR in Thai listed corporate annual reports during 2012 to 2015; to test the different level of IR in annual reports between SET100 firms and Non-SET100 firms as well as CSR award firms and Non-CSR award firms; and to test the effect of integrated reporting on corporate financial performance.

According to stakeholder theory, company will provide its activities and actions serving its stakeholder demands. Even though the power of stakeholders in each group is different, the company will not response only financial stakeholders such as investors, creditors, and shareholders, but also the other stakeholders either such as employees, customers, society and community, environmental lobby, and regulators. Therefore, different companies within different corporate characteristics such as size of company, industry type,

auditing type, ownership status, and business type will provide totally different IR in terms of extent and level of disclosures because they have different type and number of their stakeholders. The stakeholder theory is used to explain the extent and level of IR in annual reports of Thai listed companies as well as the different level of IR between the groups of interest in this study.

The concept of IR reporting in Thailand is supported by the stakeholder theory because the corporate existences are depended on their stakeholder demands. Each group of stakeholder has right to receive information from the companies, even though the stakeholders might not use the information, nor have direct influence on the firms (Gray et al., 1998). Different types of stakeholder have different power to compel and affect corporate actions and activities, and the companies need to continually adapt their operating and reporting behaviors (Islam and Deegan, 2010). In addition, the companies also need to maintain the relationship with their stakeholders by frequently providing information such as IR reporting in annual reports. According to Fauzi et al. (2007), stakeholders can be classified into two categories: primary and secondary. Primary stakeholders such as customers, suppliers, employees and investors are directly affected by every decision made by the company. On the other hand, secondary stakeholders may be either directly or indirectly affected by the company's decisions. These stakeholders include business groups, local communities, the media, social activist groups, and foreign and local governments.

In agency theory, a corporation faces the problems about conflict of interest between agents (top managements) and principles (owners) such as higher agency costs, and information asymmetry. To reduce the agency costs, Frias-Aceituno et al. (2014) found that the corporation has to be interested in publishing greater volumes of information. Disclosing more information also reduce the problem of information asymmetry. Therefore, agency theory can explain why the IR can affect the corporate financial performance.

To adopt the IR reporting, the companies are required to focus on both financial and non-financial information as the long-term performance rather than only financial information as the short-term performance (De Villiers et al., 2014). Moreover, corporate long-term performance under the IR can reduce conflict of interest and information asymmetry between top managements and shareholders. Therefore, the balance needs between principles and agents would be met with the IR practice. When the companies can satisfy the information demands in both managements and owners, they would benefit to have better financial performance (Nasi et al. 1997). Therefore, this theory can explain the reasons of corporation provide the IR reporting in annual reports.

3. The motivation for the integrated reporting

The integrated reporting is the latest and modern tool of an evolution of corporate combination reporting that has (1) solved the problems of the traditional financial and non-financial reporting, and (2) bought on earlier development which extended the provision of information to corporate stakeholders (Eccles and Krzus, 2011). Although there are some combination reporting tools such as Triple Bottom Line, sufficiency economy philosophy, and sustainable development, all tools are still voluntary reporting where the companies will pick up only the benefit information to report to their stakeholders (Bebbington and Gray,

2001). Moreover, it is also hard to compare between companies especially non-financial information reporting because the guidelines of each measurement tool use different indicators to measure and disclose the corporate information. The IR, on the other hand, can fix the problems including the awareness of a long-term sustainable development perspective, an increase of comparability on global corporations, and a reduction of corporate reputational risk.

The development of IR was given impetus by the global financial crisis and driven by perceived needs for an improved method of reporting that incorporates a range of financial and non-financial information reporting necessary for effective decision-making and risk management in the current business, and financial environment (Abeysekera, 2012). There have been also a growing awareness on the part of both corporates and investors of the interconnectedness between financial stability and environmental and social sustainability, the needs for greater integration between financial and non-financial information, and present and future-oriented data in reporting to their stakeholders.

The IR has been developed by the International Integrated Reporting Council (IIRC) which was formed since 2010 from the Global Reporting Initiative (GRI) and the Prince of Wales Accounting for Sustainability Project (IIRC, 2012). The main objectives of IR are to create the corporate reporting in financial information, non-financial information, and goals including setting the framework and guideline for IR. The benefits of IR are included that facilitate in seeking new business opportunities, safeguard corporate reputation, maximize competitive advantage, and mitigate operational risk. In 2012, the IIRC re-launched the International IR Framework Outline including the Prototype of the International Framework in 2013 (IIRC, 2013). The Prototype of the International Framework has set out definition of key concepts and principles which are intended to underpin the content and description of the IR. The IIRC announced its intention to publish the first version of IR framework (1.0) in 2013. However, the IR is become a mandatory reporting in some countries such as the South Africa, and the European Countries, the IR is still a voluntary reporting in Thailand.

The IR are divided within five guiding principles for IR structure, six content elements, and six corporate capitals. The guiding principles of IR structure are consisted by strategic focus, information connectivity, future orientation, responsiveness and stakeholder inclusiveness, and conciseness, reliability, and materiality. Into the six content elements, there are organizational overview and business model, operating context including risks and opportunities, strategic objectives and strategies to achieve those objectives, governance and remuneration, performance, and future outlook. For the corporate capitals, the IR will not display only financial capital, but also manufactured, human, intellectual, natural, and social and relationship capitals either. This study will quantify the IR following by the six corporate capital reporting in annual reports by Thai listed companies in the Stock Exchange of Thailand.

4. Literature review and hypothesis development

Because the integrated reporting has just launched since 2010, there were a little literatures about the integrated reporting studies (Jensen and Berg, 2012, Solomon and Maroun, 2012, Garcia-Benau et al., 2013, Churet and Eccles, 2014, Frias-Aceituno et al., 2014, Rensburg

and Botha, 2014, Steyn, 2014). For instant, Garcia-Benau et al. (2013) find that the companies in cultural systems with stronger collectivist and feminist values are more likely to provide the IR as such systems emphasize good corporate governance, ethics and solving sustainability issues. Jensen and Berg (2012) compare the qualitative characteristics of companies that produce either traditional sustainable development reporting or the IR, and test for the relationship between national institutional framework factors (i.e. political system, financial system, education and labor system, cultural system, and economic system, and the reporting on sustainable development and the IR. Using 309 world leading companies, the results show that there are different disclosures between sustainability reporting and the IR. Moreover, investor and employment protection laws, the intensity of market orientation and ownership concentration, the level of economic, the degree of national corporate responsibility, and the value of the country of origin have affected to the IR. This is because the IR is not motivated by market demands, but involves corporate attempting to appeal to stakeholders. They also find that the IR are more common in developed countries than developing countries. Some prior studies used a qualitative research to find out the concept of integrated reporting. For example, Higgin et al. (2014) interviewed manager in Australian finding that the integrated reporting is used as benefit to their companies, therefore, they considered to link resources with corporate strategy as a way to assist the generation of forward looking information and managing strategic challenge. Steyn (2014) interviewed the senior executive managers of listed companies in the Johannesburg Stock Exchange in South Africa on the benefit of the integrated reporting adoption to outweigh its costs. Steyn (2014) found that the primary motivation for having integrated reporting into their companies was to advance corporate image and to comply with the regulation requirement. Atkins and Maroun (2015) interviewed 20 institutional investors in the South Africa finding that the investors consider the integrated reporting to enhance the competitiveness of South Africa.

There were a few prior studies on the relationship between the integrated reporting and financial performance (See Frias-Aceituno et al., 2014, Wild and Van Staden, 2013, Churet and Eccles, 2014). For example, Frias-Aceituno et al. (2014) tested the corporate characteristics influencing the integrated sustainability and financial reporting of 1590 international companies around the world during 2008 to 2010. Logistic regression and panel data analysis are used to analyze the data of their study. By using agency theory, signaling theory, political costs theory, and proprietary costs theory, their study finds that there is the negative impact of industry type on the development of IR. Moreover, they find that large companies with higher profitability are more likely to prepare the IR than small companies with lower profitability because they are more politically visible and face higher agency costs. Wild and Van Staden (2013) investigate the extent and nature of IR, and test for a relationship between corporate characteristics consisting of size, industry, profitability, country, and auditor, and the level of IR of 58 companies from the database of the IIRC in 2013. They finds that most companies address financial, human, natural, and social capitals in their annual reports, while manufactured, and intellectual capital are not well addressed. The results indicate that there is a negative relationship between type of industry and the level of IR, but not for the other corporate factors. Churet and Eccles (2014) tested the relationship between the IR and financial performance, but they also find no possible relationship between them. However, the results of relationship between the integrated reporting and corporate financial performance were mixed. Moreover, there is still no literature about the relationship

between the integrated reporting and corporate financial performance in developing countries especially in Asia where are in different context with developed countries.

However, the study also picks up the previous studies related to the relationship between the combination information reporting and corporate performance. On one hand, most prior studies found a positive relationship between both financial and non-financial information reporting and corporate performance (See Garcia-Castro et al., 2010, Nakao et al., 2007, Chirapanda and Yoopetch, 2008, Kantabutra, 2006). This is because the companies with a better financial performance and a higher firm value tend to satisfy the information demands of their stakeholders, including demands for combination information reporting (Nasi *et al.* 1997). The agency theory can explain that integrated reporting can close the conflict between corporate owners and managers by increasing their financial performance, therefore, companies may earn profits which more than offset the cost of integrated disclosures (Frias-Aceituno et al., 2014). But, on the other hand, Connelly and Limpaphayom (2004) found that corporations are likely to view the voluntary reporting as a cost acting to reduce corporate profits and that companies will provide as little integrated reporting as possible to meet the minimum requirement. Therefore, there would tend to be a negative relationship between integrated reporting and corporate financial performance (Wright and Ferris, 1997). Some prior literatures found no relationship between both financial and non-financial information reporting and corporate performance (Rahman et al., 2010, Aras et al., 2009). Therefore, to find out the blank of relationship between the IR and corporate performance in developing countries representing by Thailand, the study provides six hypotheses following by the six corporate capital reporting of the integrated reporting that are:

H1: Financial capital reporting has positive affected on corporate financial performance.

H2: Manufactured capital reporting has positive affected on corporate financial performance.

H3: Intellectual capital reporting has positive affected on corporate financial performance.

H4: Human capital reporting has positive affected on corporate financial performance.

H5: Social capital reporting has positive affected on corporate financial performance.

H6: Environmental capital reporting has positive affected on corporate financial performance.

Two control variables from corporate characteristics that are used to test the relationship between the IR and corporate financial performance are the corporate social responsibility (CSR) award and size of company. This is because the CSR award represents how listed companies respect and response not only their shareholders and investors, but also all of their stakeholders. The main aim of CSR award is to encourage companies to balance their economic, societal, and environmental responsibility to reach the corporate sustainability. Moreover, the CSR award is used as an indicator of how companies satisfy societal expectations through both societal and environmental responsibility as well as exercising financial responsibility. For the prior studies, Suttipun (2014) and Deegan and Gordon (1996) found a positive influence of the CSR award on the relationship between non-

financial information reporting and corporate performance. Therefore, the study picks up the CSR awards as control variable and hypothesis that:

H7: The CSR award has positive affected on corporate financial performance.

In terms of company size, on one hand, the larger companies need to report more information than smaller companies in respect of both financial and non-financial information, because they have more number and groups of stakeholders (Cowen et al., 1987). Previous studies (See Raar, 2002; Camfferman and Cooke, 2002) have found a positive association between the level of non-financial information reported and the size of company. On the other hand, the notion of corporate growth in mainstream economics, typified by the concept of "larger is better than smaller", has become entrenched in the business environment. Some previous studies (See Majumdar, 1997, Almajali et al., 2012) have been able to show that larger companies produce a higher level of performance than smaller companies. Therefore, this study hypothesises that:

H8: Size of company has positive affected on corporate financial performance.

5. Methods

Methods of this study are separated into three parts that consist of data and sample selection, dependent and independent variables used in the study, and data analysis including the equations used for study. Firstly, the population in this study is all the companies listed on the SET (556 firms). Using a simple random sampling, 150 companies listed on the SET are chosen as the sample in this study (SET, 2015). The sources of the integrated reporting information are the 2012 to 2015 annual integrated reports of the companies selected. This source is adopted because the annual report is a conveniently available source of information and is provided regularly every year (Amran and Devi, 2008). It also represents the main form of corporate communication to stakeholders. Moreover, many previous studies relating to the integrated reporting have used annual reports as their main source of information. The data are collected during July 2015 to June 2016.

To measure the variable used in this study, there are six independent variables, a dependent variable, and two control variables. For independent variable measurement in this study, the level of integrated reporting can be measured in five different ways: content analysis, questionnaire survey, reputational measures, uni-dimensional indicators, and ethical rating. However, content analysis is selected to be used in this study because it has been the most common method used for assessing non-financial information reporting (Gray et al., 1998) and has been used in many previous studies (Raar, 2002; Hackston and Milne, 1996). Moreover, Krippendorff (2004) asserted that content analysis is a technique allowing a replicable and valid inference from data according to the context. Word count from annual reports is used as the analysis unit because it can be more easily categorized, and needs less subjective judgment by the researcher (Gamerschlag et al., 2011). By Thai context limitation, the study cannot use sentence count because it does not have fullstop in Thai sentence so this method cannot be used. Moreover, there is no regulation about front size and paper size producing corporate annual reports, therefore, line and page count also are not appropriate to use in this study.

For dependent variable measurement, Fiori et al. (2007) suggested that corporate financial performance can be measured by profitability, solvency, liquidity, and efficiency. The most common measures of performance are return on assets (ROA), return on equity (ROE) and Tobin's Q (Margolis and Walsh, 2001). However, Tobin's Q is used in this study because it has been commonly and widely used as an indicator of a company's financial performance in previous studies (e.g. Aras et al., 2009, Margolis and Walsh, 2001). Tobin's Q data was collected from the website of the SET (www.set.or.th/set/commomlookup.do). Moreover, there are two control variables used in this study that are size of company, and corporate social responsibility award.

All the data was hand collected. Within three main objectives, descriptive analysis is used to quantify the extent and level of integrated reporting in annual reports by Thai listed companies, independent samples t-test is used to test the different level of integrated reporting in annual reports between SET100 firms and Non-SET100 firms and between CSR award firms and Non-CSR award firms, and multiple regression is used to test the effect of integrated reporting on corporate financial performance of Thai listed companies. For multiple regression, there are two models used in this study which are:

TOBIN = a + b1FCR + b2MCR + b3ICR + b4HCR + b5SCR + b6ECR + error

TOBIN = a + b1FCR + b2MCR + b3ICR + b4HCR + b5SCR + b6ECR + b7SCOM + b8CARAW + error (where)

TOBIN = Corporate financial performance (Tobin's Q)

FCR = Financial capital reporting (Content analysis by word count)

MCR = Manufactured capital reporting (Content analysis by word count)

ICR = Intellectual capital reporting (Content analysis by word count)

HCR = Human capital reporting (Content analysis by word count)

SCR = Social capital reporting (Content analysis by word count)

ECR = Environmental capital reporting (Content analysis by word count)

SCOM = Size of companies (Dummy variable by 1 as SET100 firms, and 0 as the otherwise)

CARAW = CSR award firms (Dummy variable by 1 as CSR award firms, and 0 as the otherwise)

6. Findings and discussions

Table 1 shows the extent and level of integrated reporting in annual reports by listed companies from the Stock Exchange of Thailand (SET) during 2012 to 2015. As the results, the average level of integrated reporting was 603.59 words (SD = 509.59) which the most

common integrated reporting was intellectual capital reporting (180.44 average words) following by social capital reporting (129.27 average words), financial capital reporting (116.08 average words), human capital reporting (76.77 average words), manufactured capital reporting (59.05 average words), and environmental capital reporting (41.98 average words). Within eight industries in the Stock Exchange of Thailand, the companies in technology industry (969.49 average words) provided the most common level of integrated reporting during period being study, while the less common level of integrated reporting was in property and construction industry (262.48 average words) which was around four times smaller than companies in technology industry. The result of most common IR in this study was different with Wild and Van Staden (2013) who found that intellectual capital reporting are not well addressed from companies listed in Africa. This may be because the companies need to satisfy their stakeholders, but different groups of stakeholder have different power to compel the companies (Islam and Deegan, 2010). Therefore, following by this results, companies have been forced by their stakeholders to provide more intellectual capital reporting than the other capital reporting.

Table 1: Cross section between industry and the integrated reporting in each capital

Industry	Finance M (SD)	Manufactured M (SD)	Intellectual M (SD)	Human M(SD)	Society M (SD)	Environment M (SD)	Average M (SD)
Agriculture and food	93.00 (24.72)	45.83 (19.98)	133.55 (33.47)	76.40 (38.84)	143.37 (73.52)	23.38 (11.37)	515.53 (187.11)
Finance	117.68 (20.68)	6.46 (5.15)	257.92 (80.40)	57.28 (22.83)	73.63 (26.96)	18.78 (7.64)	531.74 (138.30)
Natural Resource	145.12 (11.62)	112.05 (12.75)	226.68 (22.05)	100.87 (11.05)	176.57 (19.74)	78.02 (7.61)	839.30 (78.21)
Consumer product	75.63 (10.96)	26.73 (11.47)	101.85 (46.48)	17.96 (3.90)	46.25 (14.99)	18.25 (8.16)	286.67 (84.58)
Property & Construct.	89.28 (12.76)	9.65 (2.76)	86.87 (14.52)	27.06 (5.15)	41.27 (7.77)	8.35 (2.69)	262.48 (32.64)
Industrial Product	87.33 (7.03)	76.68 (8.03)	151.13 (7.40)	80.55 (4.99)	100.88 (6.98)	49.15 (5.26)	546.20 (29.44)
Technology	159.51 (26.03)	111.50 (17.67)	260.68 (44.92)	138.60 (23.00)	223.87 (40.37)	75.32 (13.70)	969.49 (144.08)
Service	138.13 (10.62)	93.05 (9.98)	223.17 (20.54)	115.53 (12.47)	213.77 (26.10)	65.96 (7.79)	849.61 (81.17)
Average	116.08 (76.23)	59.05 (44.49)	180.44 (172.30)	76.77 (73.66)	129.27 (118.19)	41.98 (34.59)	603.59 (509.59)

Figure 1 shows the pine chart of integrated reporting in Thai listed annual reports by six capital reporting consisting of financial, manufactured, human, intellectual, social, and environmental capital reporting. The findings indicates that the most common integrated reporting was in intellectual capital reporting as 30 percent of total integrated reporting following by social capital reporting (21 percent), human capital reporting (19 percent), human capital reporting (13 percent), manufactured capital reporting (ten percent), and environmental capital reporting (seven percent). The findings indicate the different results with the prior study of Suttipun (2012) finding that the most common reporting of triple bottom line reporting in annual reports of Thai listed companies in year 2011 was financial

information reporting (Economic information) rather than non-financial information reporting (Social and environmental information). The different results may be because non-financial information reporting can impact more variety groups of stakeholder than financial information reporting that can affect to only shareholders, investors, and creditors.

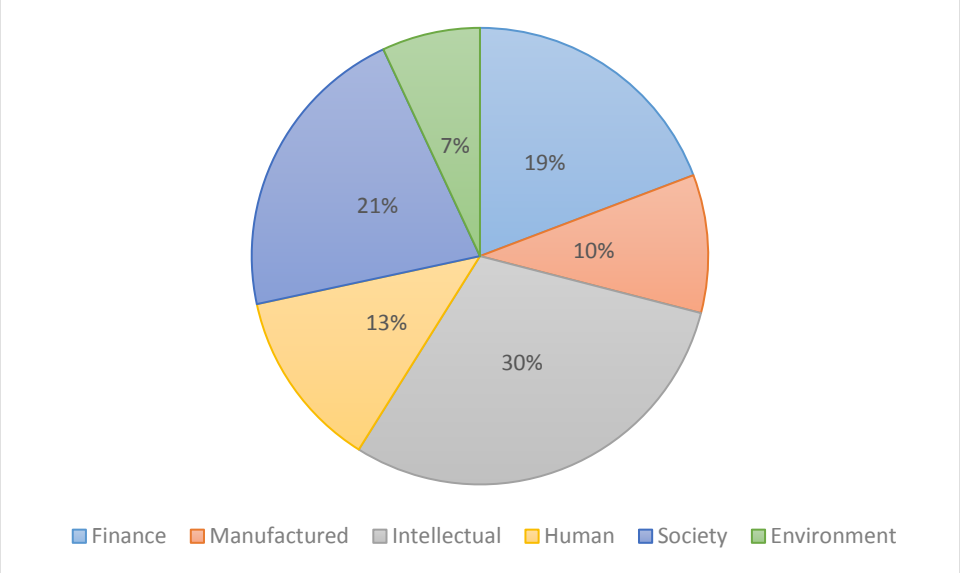

Figure 1: The proportion of integrated reporting by capital reporting

Table 2 is shown to test the different level of integrated reporting in annual reports between SET100 companies and Non-SET100 companies, and between CSR award companies and Non-CSR award companies by using independent sample t-test. In term of company size, SET100 companies (n = 70 firms) provided 868.87 average words of integrated reporting in their annual reports, while Non-SET100 companies (n = 80 firms) disclosed 371.48 average words of integrated reporting. This study finds that there is a significant different level of integrated reporting between SET100 and Non-SET100 companies at 0.01 level. The result in this study was consistent with Suttipun (2015) who found the significant different sustainability reporting in annual reports of Thai listed companies between SET50 firms and Non-SET50 firms. In terms of corporate social responsibility award, there were 35 companies having and experiencing CSR award during period being study, while 115 firms did not have CSR award. To test the different level of integrated reporting between groups of interest, the study finds a significant different level of reporting CSR award companies (868.91 average words) and Non-CSR award companies (522.85 average words) at 0.01 level. The result in this study was consistent with Suttipun (2014) who found the significant different CSR reporting of listed companies in the Stock Exchange of Thailand between CSR award companies and Non-CSR award companies.

Table 2: Independent sample t-test

Independent sample t-test		N	Mean	SD	t-test	
					t	Sig.
Company size	SET100	70	868.87	598.306	6.919	.000**
	Non-set100	80	371.48	220.802		
CSR award	Have	35	868.91	584.526	3.709	.000**
	Have no	115	522.85	448.753		

** is significant at 0.01 level, * is significant at 0.05 level

Descriptive analysis and correlation matrix are indicated into table 3 to (1) show mean and SD of all variables used in this study, and to (2) test for multicollinearity. As the results, the average level of intellectual capital reporting (ICR) was 180.44 words following by social capital reporting (SCR) as 129.27 words, financial capital reporting (FCR) as 116.08 words, human capital reporting (HCR) as 76.77 words, manufactured capital reporting (MCR) as 59.05 words, and environmental capital reporting (ECR) as 41.98 words. Tobin's Q (TOBIN) is used to measure the corporate financial performance in this study. The average Tobin's Q was 1.65 (SD = 0.94). To test for multicollinearity between the variables used in this study, table 3 is also shown the correlation matrix of nine variables consisting of one dependent variable, six independent variables, and two control variables. The Variance Inflation Factors (VIF) of correlation matrix between variables was 1.386. Therefore, this can be alright to test using multiple regression model by all variables because the VIF is not over 10 which is multicollinarity problem.

Table 3: Correlation matrix

Variable	TOBIN	FCR	MCR	ICR	HCR	SCR	ECR	SCOM	CSRAW
Mean	1.65	116.08	59.05	180.44	76.77	129.27	41.98	0.53	0.76
SD	0.94	76.23	64.49	172.30	129.27	148.19	44.59	0.50	0.42
TOBIN	1	.040	.170*	.110	.067	.126	.054	.130	.033
FCR		1	.589**	.536**	.733**	.658**	.574**	.367**	.153
MCR			1	.488**	.742**	.737**	.824**	.318**	.281**
ICR				1	.661**	.604**	.604**	.479**	.284**
HCR					1	.892**	.792**	.395**	.196*
SCR						1	.768**	.466**	.268**
ECR							1	.355**	.270**
SCOM								1	.337**
CSRAW									1

** is significant at 0.01 level, * is significant at 0.05 level

To test the effect of integrated reporting on corporate financial performance of listed companies from the Stock Exchange of Thailand, table 4 is indicated within two models: without control variable; and within control variables. In model 1, the study finds the significantly positive effect of manufactured capital reporting (MCR) on the corporate financial performance at 0.01 level, while there was a negatively significant influence of environmental capital reporting (ECR) on the Tobin's Q at 0.05 level. However, the study finds no significant effect of financial (FCR), intellectual (ICR), human (HCR), and social (SCR) capital reporting on the corporate financial performance at 0.05 level. In model 2, the study tests the effect of integrated reporting on corporate financial performance controlling by corporate characteristics: size of company; and CSR award. As the results, the findings

indicate the same result with model 1 that there was positive (MCR), negative (ECR), and no (FCR, ICR, HCR, and SCR) effects on the Tobin's Q controlling by size of company and CSR award. Moreover, the study finds the positively significant effect of CSR award on the corporate financial performance at 0.01 level, while no effect of company size on the financial performance at 0.05 level.

In the relationship between manufactured capital reporting and corporate financial performance, the study found the similar result with Garcia-Castro et al. (2010) and Nakao et al. (2007). The result can be explained by the agency theory that the manufactured capital reporting can close the conflict between principle and agent by increasing corporate financial performance so the company may earn profits which more than offset the cost of manufactured capital reporting (Frias-Aceituno et al., 2014). On the other hand, this study found negative relationship between environmental capital reporting and corporate financial performance. Similarly with Connelly and Limpaphayom (2004) and Wright and Ferris (1997), the reason may be because the companies are likely to view the voluntary reporting as a cost acting to reduce corporate performance, therefore, the companies will provide as little environmental capital reporting as possible to meet the minimum requirement of stakeholders. From the study's findings, therefore, agency theory already demonstrates that it can explain the change of corporate financial performance of Thai listed companies in the SET if they (See manufactured and environmental capital reporting) are value/costs-relevant. Moreover, they also help to reduce the information asymmetry and agency costs.

In the relationship between control variable and corporate financial performance, this study found a positively significant relationship between corporate social responsibility reward and financial performance. The result was similar with Suttipun (2014) and Deegan and Gordon (1996). The reason is that corporate social responsibility award will represent how companies respect and response not only their shareholders and investors, but also all of their stakeholders. Therefore, when the companies satisfy all of their stakeholders, they will be rewarded by having higher performance.

Table 4: Multiple regression

Variable	Model 1		Model 2	
	B	t (sig)	B	t (sig)
Constant	1.560	10.726 (.000**)	1.281	2.697 (.008**)
FCR	-.001	-.729 (.467)	-.001	-.844 (.383)
MCR	.006	2.737 (.007**)	.007	2.961 (.004**)
ICR	.001	1.525 (.129)	.001	1.457 (.147)
HCR	-.003	-1.175 (.242)	-.003	-1.292 (.199)
SCR	.002	1.445 (.151)	.002	1.361 (.176)
ECR	-.007	-2.063 (.041*)	-.007	-1.996 (.048*)
SCOM	-	-	.195	1.051 (.292)
CSRAW	-	-	.334	2.707 (.009**)
R Square	.083		.105	
Adjust R Square	.045		.055	
F-value	2.171 (.049*)		2.074 (.042*)	

** is significant at 0.01 level, * is significant at 0.05 level

7. Summaries and recommendations

To investigate the extent and level of integrated reporting in annual reports of listed companies from the Stock Exchange of Thailand, to test the different level of integrated reporting in annual reports between SET100 companies and Non-SET100 companies, and between CSR award companies and Non-CSR award companies, and to test the effect of integrated reporting on corporate financial performance of listed companies from the Stock Exchange of Thailand, this study found that the companies provide 603.59 average words of integrated reporting in their annual reporting during period being study. Intellectual capital reporting is the most common reporting of Thai listed companies, while environmental capital reporting is the less common reporting of integrated reporting. The companies in technology industry disclose the highest level of integrated reporting, but the companies in property and construction industry provide the lowest level of reporting. There are significant differences of level of integrated reporting between SET100 companies and Non-SET100 companies, as well was CSR award companies and Non-CSR award companies. To test the effect of integrated reporting on financial performance, the study finds that manufactured capital reporting and CSR award companies have positively affected to the level of integrated reporting, while environmental capital reporting has negatively affected to the level of integrated reporting.

This study provides some contributions and implications. On practical contributions, the study enhances the understanding of the relationship between the IR and corporate financial performance in developing countries as well as developed countries. It also contributes useful knowledge to investors, shareholders, and the other stakeholders who consider the IR for decision making. This study can lead to develop in the working of integrated reporting regulations in Thailand. This study also contribute legal and management scholarship by determining the impact that integrated reporting has on corporate financial performance. On theoretical contributions, stakeholder and agency theories demonstrate that the IR has the potential to (1) increase non-financial information reporting in Thailand as well as financial information reporting, and to (2) change the corporate financial performance of Thai listed companies in the SET if they (See manufactured and environmental capital reporting) are value/costs-relevant which also help to reduce the information asymmetry and agency costs.

However, some limitations of the study should be provided. The number of sample used in this study can be mentioned as limitation because out of over 500 listed companies from the SET, this study picked up only 150 firms, therefore, the results following by objectives may not relate to the number of population. The proxy of corporate financial performance was Tobin’s Q. However, there are several proxies of financial performance such as total on asset, total on investment, total on equity, and economic value added. The study quantified the IR only six corporate capitals rather than five guiding principles of IR structure and six content elements. From the study limitations above, the suggestion for future study should be considered. The future study will investigate the five guiding principles of IR structure and six content elements of the IR in annual reports of all listed companies in the SET, and test for the relationship between the IR and the other proxies of corporate financial performance.

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