



Department of Accounting  
Faculty of Management Studies and Commerce  
University of Sri Jayewardenepura, Sri Lanka

## THE IMPACT OF CORPORATE GOVERNANCE MECHANISMS ON INTELLECTUAL CAPITAL DISCLOSURE: EVIDENCE FROM NON-FINANCIAL LISTED COMPANIES IN SRI LANKA

Dias APGS, Manawaduge ASPG 

Department of Accounting, University of Sri Jayewardenepura

### Abstract

The purpose of this paper is to examine the impact of Corporate Governance (CG) mechanisms on Intellectual Capital (IC) disclosure of non-financial listed companies of Colombo Stock Exchange (CSE). The study is conducted on a sample of 80 listed companies selected based on the highest market capitalization across six industry sectors of CSE. A content analysis is used to identify the level of IC disclosure and the agency theory and resource dependency theory are employed to develop hypotheses to examine the impact of CG mechanisms on the IC disclosure level. The results indicate that the Company Size has a significant impact on the level of IC disclosure. However, the findings also indicate that Independent Directors, Company Leverage, Company Performance, CEO Duality, and Block-holder Ownership do not have a significant impact on IC disclosures. This is an indicative symptom of the inefficiency associated with the CG mechanisms. Descriptive statistics show that the average IC disclosure level is about 32.4%. The content analysis shows that most Sri Lankan companies do not have IC disclosures as a separate section in their annual reports. The result further shows that a high variation of disclosure level among companies indicating a lack of consistency in adopting disclosure practices by the firms. The findings are particularly useful to policymakers, regulators, and corporate managers in identifying poor governance practices and the level of IC transparency of Sri Lankan firms. The paper also contributes to the international debate on corporate governance practices and mechanisms that can improve IC disclosures of listed firms in the emerging stock markets.

**Keywords:** Board Characteristics, Corporate Governance, Intellectual Capital Disclosure, Ownership Structure

Received:  
10.02.2021

Accepted revised version:  
11.08.2021

Published:  
02.10.2021

Suggested citation: Dias, APGS & Manawaduge, ASPG 2021, 'The impact of corporate governance mechanisms on intellectual capital disclosure: evidence from non-financial listed companies in Sri Lanka', *Journal of Contemporary Perspectives in Accounting and Digitalization*, vol. 4, no. 1, pp. 29-50.

JCPAD © 2022 is licensed under Creative Commons Attribution 4.0 International license which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

 athula@sjp.ac.lk

## **1 INTRODUCTION**

Corporate Governance (CG) is a set of control mechanisms that are used widely to monitor and ratify management decisions, and to make sure that the entity is operating efficiently in the best interests of its stakeholders (Donnelly & Mulcahy 2008). The specific tools of corporate governance such as CEO duality, board independence (proportion of independent non-executive directors), block-holder ownership, and board size are supposed to improve firm transparency and decrease the information asymmetry (Cormier et al. 2010).

Intellectual Capital (IC) contains intellectual assets which can be converted into revenue sources (Sullivan 1998). IC disclosures are vital in determining firm performance and have become as much significant as corporate governance. Financial statements do not include information on an entity's IC such as human capital, innovations, etc., because of their identification, recognition, and measurement issues. However, investors have a high concern regarding these types of information which are not reflected in the financial statements as they are also critical in deriving organizational value. Since traditional financial statements do not contain a specific framework to disclose information regarding intellectual capital, they do not satisfy the informational requirements of stakeholders. To reduce this limitation, Petty and Cuganesan (2005) argue that information relating to intellectual capital should be disclosed voluntarily by entities to satisfy the informational desires of all stakeholders. Accordingly, most of the corporate giants have begun to disclose non-financial information voluntarily to satiate the informational desires of stakeholders.

Companies have begun to pay increased attention to the significance of disclosing voluntary information (Bukh et al. 2005, Yi & Davey 2010) and good corporate governance mechanisms will always guide to enhance the degree and the quality of transparency. Corporate governance operates as a significant tool that assists business organizations to realize their corporate objectives whereas disclosure is a vital device for communicating their corporate performance to investors. This circumstance has pursued researchers to explore the impact of corporate governance mechanisms on voluntary disclosure such as intellectual capital disclosure.

Most of the prior studies have focused on identifying the link between corporate governance and voluntary disclosure (McKinnon & Dalimunthe 1993, Eng & Mak 2003). Only a few studies have focused on establishing relationships between corporate governance, IC disclosure, and ownership structure (Abeysekera 2010, Hidalgo, García-Meca & Martínez 2011, Cerbioni & Parbonetti 2007). However, there is little evidence from the previous literature of the impact of corporate governance mechanisms on the intellectual capital disclosure level. When reviewing the existing literature, we can see that there is an inadequate number of literature available on IC disclosure and its determinants. Parker (2007) stated that the Intellectual Capital research studies are at the infant stage and there are various avenues to conduct further research on this area.

Although there are several IC studies conducted in developed countries, there is a dearth of research on IC disclosure in developing nations compared to developed nations (Abeysekera 2010). Considering Sri Lanka as a developing country, this paper intends to fill this gap by exploring the impact of selected corporate governance mechanisms on the intellectual capital disclosure of non-financial companies listed on the CSE. However, this study does not focus on banking, finance, insurance, and investment trusts as those sectors are highly regulated and their financial statements are significantly different from other companies due to the specific rules and regulations those sectors are subjected to. Thus, this research will contribute to the

existing literature on the impact of corporate governance mechanisms on IC disclosure of non-financial listed companies listed on the CSE.

This study aims to achieve two main objectives in terms of non-financial public listed companies in Sri Lanka. The first objective is to assess the degree of selected corporate governance mechanisms and intellectual capital disclosure among non-financial companies listed on the CSE whereas the second objective is to explore the relationship between selected corporate governance mechanisms (board size, proportion of independent non-executive directors, CEO duality and block-holder ownership) and IC disclosure.

The remaining sections of the study are structured as follows: the next section discusses the existing literature followed by the hypothesis development; the third section elaborates the research methodology; the fourth section presents the analysis and discussion, and the conclusion is presented in the final section.

## **2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

This section mainly focuses on key concepts such as Corporate Governance and Intellectual Capital Disclosure considered in this study. Moreover, the important theories relating to building the relationship between corporate governance and intellectual capital disclosure will be explored. This section also highlights what kind of a direct relationship is in effect as per prior research studies and the hypothesis will be developed accordingly. Moving forward from the existing literature, the final review has been done to identify the gaps related to prevailing studies and to identify the areas for further research.

### **2.1 Concepts of Corporate Governance, Intellectual Capital and Intellectual Capital Disclosure**

#### **2.1.1 Corporate Governance (CG)**

There is no unanimous definition for Corporate Governance (CG) as demonstrated in the varieties of definitions presented by well-known practitioners and scholars. For instance, Cadbury Committee (1992) depicts CG as ‘the system by which companies are directed and controlled’ while many other researchers have given different definitions for the concept of CG.

Therefore, as mentioned before, it is hard to give a precise definition for corporate governance due to the constantly escalating boundaries of the concept (Roche 2005). Definitions of CG differ with the context and cultural conditions of a given country. Good corporate governance practices should offer the required tools to enhance the level of transparency and the quality of the disclosed information (Fung 2014). Keenan and Aggestam (2001) and Clemente and Labat (2009) pointed out that effective corporate governance tools will create a positive impact on efficient intellectual capital management, as well as the disclosure of corporate information to stakeholders. If there are required CG mechanisms for effective functioning of corporate governance, that can positively affect IC disclosure.

#### **2.1.2 Intellectual Capital (IC)**

Intellectual capital can also be defined as a collection of intangible assets. There are many different types of intangible assets such as technology, customer information, brand name,

corporate culture, and corporate reputation that are very beneficial in achieving a competitive advantage for the company over other competitors (Low & Kalafut 2002). Intellectual Capital is a mandatory component for the value creation of an organization and has become as much important as Corporate Governance. Thus, managing intellectual capital wisely is one of the fundamental success factors of any businesses organization which operates in the knowledge era.

The IC of an organization contains a diverse set of intangible resources such as employees' competencies, skills, working environment, social values, brands, patents, database, procedures, intellectual property, industrial property, and honesty (Khalique et al. 2012). These IC resources can be categorized into three main components, namely, external capital, internal capital, and human capital (Sveiby 1997).

The financial position of any organization does not indicate the value of external capital, internal capital, and human capital discretely under the IC disclosures; instead, it only depicts the value of tangible or intangible assets. Disclosure of IC in corporate annual reports is voluntary to a huge extent, as many features of IC are unable to comply with the required accounting standards for presence in the financial reports, or they are not capable of measuring in financial terms (Whiting & Miller 2008).

Over the past years, the amount of research studies relating to the disclosure of IC information has drastically increased (Yi & Davey 2010). Most of them have been conducted using the preliminary framework of Sveiby (1997) which is improved later by Guthrie and Petty (2000) and adopted by several other authors (Abeysekera & Guthrie 2005, Bozzolan, Favotto & Ricceri 2003).

Due to the critical role of corporate voluntary disclosure and its determining factors in capital market efficiency, it has been recognized as an imperative research space and has appealed to several analytical and experimental researchers in accounting. The orientation of disclosure can be influenced by two major factors and two research areas can be identified accordingly.

1. The impact of firm characteristics (for example age, growth, size, profitability, and leverage) on IC disclosure.
2. The impact of corporate governance structures together with board characteristics and ownership structure (Huafang & Jianguo 2007).

## **2.2 Broad Theories that Link Corporate Governance and Intellectual Capital Disclosure**

### **2.2.1 Agency Theory**

Agency theory describes the link between principals and their agents (Jensen & Meckling 1976). This theory creates a link between voluntary disclosure and corporate governance in which it is used as a control device to decrease the agency conflicts arising due to the separation of ownership and management (Welker 1995). Moreover, an increased level of intellectual capital disclosure will deliver a more concentrated monitoring platform for an organization to decrease the opportunistic behavior of its members and information asymmetry (Li et al. 2008).

Agency theory also states that corporate disclosure can decrease agency costs which arise in the association between stockholders who are the fund providers of a company, and management, who are responsible for making operating decisions (Jensen & Meckling 1976, Williamson 1981). Embracing the corporate governance mechanisms such as separation of duties between chairman and CEO, board independence will enhance the internal controls of

corporates and will directly influence the reduction of the agency problem. Accordingly, intellectual capital disclosure in annual reports is expected to have high improvements (Rodrigues et al. 2016, Cerbioni & Parbonetti 2007). Therefore, agency theory would be the main underlying theory of this study, which provides a framework to explore the role of corporate governance in intellectual capital disclosure.

### **2.2.2 Resource Dependency Theory**

Resource dependency theory discusses how the external resources of an entity affect the performance of the entity. This theory depicts that larger boards give the benefit of accessing resources and information possessed by the directors that might be useful to accomplish business objectives and improved performance (Manzaneque et al. 2015). This theory also supports managers to make efficient and effective decisions by empowering corporate structures and governance mechanisms (Abeysekera 2010).

A firm's resources are the key factors behind the financial growth of the firm (Galbreath 2005). There might be tangible assets as well as intangible assets. Both these categories of assets help a business organization to accomplish the competitive edge (Abeysekera 2010, Galbreath 2005). When reviewing the prior literature, we can see that there is a great number of studies that have investigated the role of tangible assets in the growth of the firm but there are very few studies that investigate the strategic role of intangible assets (Galbreath 2005).

Using Resource dependency theory, Abeysekera (2010) has studied the influence of board size on IC disclosure based on a sample of companies listed on the Kenyan stock exchange and has found out that there is a high level of IC disclosure when there are larger boards.

## **2.3 Hypotheses**

Based on the broad theoretical and experimental literature on corporate governance and voluntary disclosure, and IC disclosure, this study intended to explore the influence of selected corporate governance mechanisms on IC disclosure. Accordingly, four hypotheses were developed and tested.

### **2.3.1 Board size**

Board size indicates the number of directors in a particular corporate board. When there's a diversified board it positively affects the company management. Moreover, when there's a larger board there's a high chance of detecting agency problems. When there is a large number of members in a board it will help a board to reduce uncertainties and information asymmetries due to more collective effort (Fauzi & Locke 2012).

Based on a Kenyan sample of companies Abeysekera (2010) observes a positive association between board size and IC disclosure. Similarly, Rodrigues et al. (2016) has identified a positive association between these two variables based on a Portugal sample of companies. Hence, this study hypothesizes that,

H<sub>1</sub>: Ceteris paribus, there is a positive association between board size and IC disclosure.

### **2.3.2 Independent Non-executive Directors**

A board could consist of a mix of Executive and Non-Executive directors. According to Fama and Jensen (1983), the composition of the board is a critical factor in managing agency conflicts. Drawing from the agency theory perception independent non-executive directors will help to reduce agency costs because they are more capable of providing independent solutions. Rosenstein and Wyatt (1990) have identified a positive share price movement just after the announcement of adding a new external director to the board.

When reviewing the prior literature, we can see several studies have provided evidence that indicates that there is a positive association between independent non-executive directors and IC disclosure. Based on a European study sample, Cerbioni and Parbonetti (2007) have identified that increase of independent non-executive directors will cause increased IC disclosure in firms. Several other researchers have indicated that independent non-executive directors have more control over the companies than other directors. Accordingly, when there is a high amount of independent non-executive directors it has increased the voluntary disclosure of companies in many instances.

Hence, this study hypothesizes that,

H<sub>2</sub>: Ceteris paribus, there is a positive association between the proportion of independent non-executive directors and IC disclosure.

### **2.3.3 CEO duality**

Drawing from the agency theory viewpoint, an independent board will enhance monitoring and control. CEO and Chairman of a board play a vital role in enhancing the monitoring and control of an entity. Fama and Jensen (1983) argue that CEO duality indicates that there is no separation between the decision control role and the decision management role. As a result, CEO duality will reduce the board's independence when managing agency conflicts. Several studies have provided evidence that indicates companies with CEO duality have caused a reduced level of voluntary disclosure (Rodrigues et al. 2016, Cerbioni & Parbonetti 2007). Hence, this study hypothesizes that,

H<sub>3</sub>: Ceteris paribus, there is a negative association between CEO duality and IC disclosure.

### **2.3.4 Block-holder ownership**

Size of the block-holder ownership plays a vital role when it comes to the corporate governance of an entity. Bonazzi and Islam (2007) point out that corporate governance has a high concern over the effective control mechanisms which operate in the best interest of an entity's shareholders. Moreover, the ownership structure of an entity plays a major role in effective corporate governance (Jensen 1993).

Several studies have been conducted over the past years to identify the relationship between block-holder ownership and voluntary disclosure. Based on a sample of Malaysian companies, Gan et al. (2013) has identified a positive relationship between block-holder ownership and IC disclosure. Similarly, many other researchers have provided evidence that there is a positive association between these two variables. Hence, this study hypothesizes that,

H<sub>4</sub>: *Ceteris paribus*, there is a positive association between block-holder ownership and the extent of IC disclosure.

### **3 RESEARCH METHODOLOGY**

This section mainly focuses on the research design and research methods that are used in this study. Accordingly, this section discusses the research approach, population and study sample, conceptual framework, hypotheses, operationalization of variables, data sources and collection methods, and analytical strategies.

#### **3.1 Research Approach**

A positivism paradigm will be used to inspect the role of corporate governance mechanisms on intellectual capital disclosure. Therefore, a quantitative approach will be useful in identifying the association between CG mechanisms and IC disclosure. On the other hand, similar empirical studies (Abeysekera 2010, Bozzolan et al. 2006; Brüggen et al. 2009) have used a similar approach to identify the relationship between corporate governance mechanisms and intellectual capital disclosure.

#### **3.2 Population and Study Sample**

It is a mandatory requirement for all listed entities in the CSE to follow amended corporate governance guidelines and the listing rules announced by the CSE, Securities and Exchange Commission (SEC), and Institute of Chartered Accountants of Sri Lanka (ICASL). Hence, the population of this study is companies listed in the CSE. From the initial set of companies listed in CSE, the companies listed under bank, finance, and insurance sectors have been excluded from the population as their financial statements are significantly different from other companies due to the specific rules, regulations, and disclosure requirements applicable to those sectors.

After excluding companies listed under the bank, finance, and insurance sector, all other companies were classified according to the sectors in which they operate. Some sectors contained only one company and this fact prevents from performing a useful analysis of these sectors. Thus, with the purpose of testing industry effects on disclosure, only sectors with 15 or more companies were selected. In the case of sectors with 15 or more companies, 50% of the total number of companies that belong to the particular sector were selected. When selecting this 50% of companies, the market capitalization of those companies was considered as companies with high market capitalization tend to have more voluntary disclosures. The main reasons for selecting companies with high market capitalization are, as those companies tend to disclose more information to stakeholders to satisfy information needs of the stakeholders and as they experience a low cost of gathering and preparing detailed information due to the high volume of the resource owned by them (Petty & Cuganesan 2005).

The final sample comprises 80 non-financial listed companies in the CSE relating to six different sectors. 2017/2018 annual reports of those selected companies were examined when conducting this study. The composition of the sector-wise sample details is indicated in Table 1.

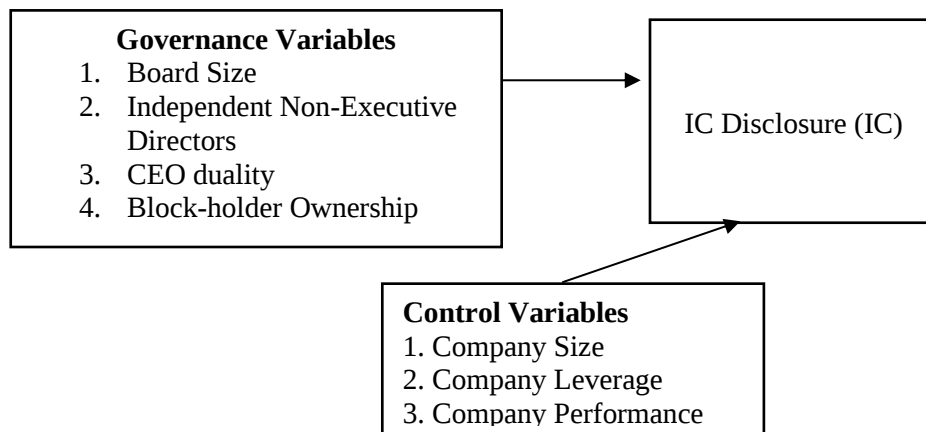
**Table 1: Sample size and industry representation**

| #            | Sector                    | No. of Firms | % of Sample |
|--------------|---------------------------|--------------|-------------|
| 1            | Beverage Food and Tobacco | 23           | 12          |
| 2            | Diversified Holdings      | 19           | 10          |
| 3            | Hotels and Travels        | 38           | 19          |
| 4            | Land and Property         | 18           | 9           |
| 5            | Manufacturing             | 39           | 19          |
| 6            | Plantation                | 21           | 11          |
| <b>Total</b> |                           | <b>235</b>   | <b>80</b>   |

Source: Author constructed

### 3.3 Conceptual Framework

Based on the literature review carried out in Section 2, below Figure 1 has been developed to demonstrate the relationship between selected corporate governance mechanisms and intellectual capital disclosure level.



**Figure 1: Conceptual Framework**

Source: Author Constructed

### 3.4 Hypotheses

Based on the prior literature the conceptual diagram and the four research hypotheses are developed. They are tested to examine the impact of CG on IC disclosures. The main hypotheses are given as follows.

H<sub>1</sub>: Intellectual capital disclosure level is positively associated with the large board size

H<sub>2</sub>: Intellectual capital disclosure level is positively associated with the higher proportion of independent non-executive directors

H<sub>3</sub>: Intellectual capital disclosure level is positively associated with the level of block-holder ownership

H<sub>4</sub>: Intellectual capital disclosure level is negatively associated with the level of CEO duality.

### 3.5 Operationalization

In this study, the corporate governance mechanisms, the board size, independent non-executive directors, CEO duality, and block-holder ownership are used as independent variables, and Intellectual Capital (IC) disclosure is used as the dependent variable and ultimately expects to examine the relationship between selected governance mechanisms and IC disclosure level in

Sri Lanka. Table 2 given below depicts the operationalization of the selected independent, dependent, and control variables used in this study.

**Table 2: Operationalization of variables**

| Variable Name                       | Variable     | Operational Definition                                                                                                                                 | Related Studies                                 |
|-------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Dependent Variable</b>           |              |                                                                                                                                                        |                                                 |
| IC disclosure level - Note 1        | $IC_{it}$    | IC disclosure index of the firm $i$ period $t$ .                                                                                                       | Uyar (2011), Xiao (2004)                        |
| <b>Independent Variables</b>        |              |                                                                                                                                                        |                                                 |
| Board size                          | $BSIZE_{it}$ | The total number of members of the board of directors of the firm $i$ period $t$ .                                                                     | Abeysekara (2010)                               |
| Independent Non-Executive directors | $INDNE_{it}$ | Ratio of independent non-executive directors to total directors of the firm $i$ period $t$ .                                                           | Detthamrong, Chancharat and Vithessonthi (2017) |
| CEO Duality                         | $ROLE_{it}$  | Dummy variable indicating 1 if the CEO of a company is not different from the chairman of the board; 0 otherwise of the firm $i$ period $t$ .          | Alfraih (2018)                                  |
| Block-holder Ownership              | $BLOCK_{it}$ | Proportion of ordinary shares held by block-holders (who owns at least 5% of shares) compared to total outstanding shares of the firm $i$ period $t$ . | Alfraih (2018)                                  |
| <b>Control Variables</b>            |              |                                                                                                                                                        |                                                 |
| Company Size                        | $SIZE_{it}$  | The natural logarithm of total assets of the firm $i$ period $t$ .                                                                                     | Garcia-meca (2005), Alfraih, (2018)             |
| Company Leverage                    | $LEV_{it}$   | The ratio of total debt to total assets of the firm $i$ period $t$ .                                                                                   | Xiao (2004), Alfraih, (2018)                    |
| Company Performance                 | $ROA_{it}$   | The ratio of EBIT divided by total assets of the firm $i$ period $t$ .                                                                                 | Detthamrong, Chancharat and Vithessonthi (2017) |

**Note 1: Calculation of the IC Disclosure Index**

As depicted in Table 2 above IC disclosure is the dependent variable of this study. A content analysis was used to identify the IC disclosure level in non-financial listed companies in Sri Lanka. As a mechanism of collecting data, content analysis codifies quantitative and qualitative data into pre-defined classifications to develop patterns in the reporting and presentation of information (Guthrie & Petty 2000) According to prior studies, Content Analysis can be defined as the most widely used mechanism for analysis of corporate disclosure (Guthrie & Parker 1990, Hackston & Milne 1996). Consistent with previous studies, this study also uses a content analysis approach to assess the extent of intellectual capital disclosure in corporate annual reports in Sri Lanka.

The content analysis identifies intellectual capital disclosures in annual reports using an established coding framework. IC framework proposed by Sveiby (1997) and modified later by Guthrie et al. (2004) is adopted in this research study to assess the level of IC disclosure among non-financial listed companies on the CSE. Many researchers have used this framework successfully in previous studies and it contains three main types of intellectual capital and 24 sub-components. The three categories are namely, internal, external, and human capital.

As used in similar prior researches (Guthrie & Petty 2000, Li et al. 2008, Abeysekera 2010, Haji & Ghazali 2013), a dichotomous (unweighted) approach is used to quantify the IC disclosure. In this approach, each item is given equal importance. Accordingly, a value of “0” is assigned to non-disclosure and a value of “1” is assigned if the item appears. Consistent with prior studies equal weight is assigned for each IC disclosure item in this study.

Each company’s annual report was analyzed and read carefully to identify the occurrence of 24 keywords (Table 3) and a score was assigned accordingly. An index was created to measure the relative disclosure level based on the total disclosure score calculated for each selected company. This index is the ratio of a company’s actual disclosure score to the extreme possible score (i.e., 24).

**Table 3: Intellectual capital framework**

| Internal capital                  | External capital          | Human capital                                                                                    |
|-----------------------------------|---------------------------|--------------------------------------------------------------------------------------------------|
| Intellectual property             | Brands                    | Education                                                                                        |
| Corporate culture                 | Customers                 | Know-how                                                                                         |
| Patents/Copyrights/<br>Trademarks | Company names             | Work-related<br>knowledge/competencies                                                           |
| Information systems               | Customer satisfaction     | Academic qualifications                                                                          |
| Networking systems                | Customer loyalty          | Professional<br>qualifications                                                                   |
| Management process                | Distribution channels     | Human capital/resources                                                                          |
| Management philosophy             | Business<br>collaboration | Training                                                                                         |
| Financial relations               | Licensing agreements      | Entrepreneurial spirit,<br>innovativeness, proactive<br>and reactive abilities,<br>changeability |

Source: Adopted from Alfraih (2018)

Internal capital is defined as “the knowledge embedded in organizational structures and processes” (Petty & Cuganesan 2005). Internal capital mainly consists of patents, trademarks, systems, and processes that are used in day-to-day corporate activities. The external capital which is another form of intellectual capital is associated with the relationships an entity has with the outside stakeholders. For instance, relationships with customers and suppliers can be considered as external capital (Petty & Cuganesan 2005). Lastly, human capital denotes the skills, competencies, education, experience, and training of employees of the company.

### **3.6 Sources and Collection of Data**

Corporate annual reports play a vital part in corporate communication. Prior literature discusses the importance of annual reports for stakeholder communication. Annual reports are the main instrument that the management of a company uses to signal important information. Therefore,

the key source of data collection for this study is corporate annual reports. Published corporate annual reports for the financial year 2017/2018 of selected 80 companies are used in conducting this study.

### **3.7 Data Analysis Strategies**

Data collected from the corporate annual reports are analyzed, using the IBM Statistical Package of Social Sciences (SPSS 23). Descriptive statistics and inferential statistics will be used largely in describing the data.

*To assess the level of IC disclosure in Sri Lankan non-financial listed companies:*

IC disclosure level of the non-financial listed companies of the Colombo Stock Exchange is measured using a content analysis approach. Most of the previous studies relating to IC disclosure have used the content analysis approach when assessing the IC disclosure level (Guthrie & Parker 1990). Accordingly, an index is developed, and a score is assigned to each category of IC disclosure as elaborated under the previous topics. Afterward, the level of IC disclosure is estimated by using measures of central tendency under descriptive statistics such as Mean, Median, and measures of dispersion such as Standard Deviation.

*To assess the level of selected corporate governance mechanisms in Sri Lankan non-financial listed companies:*

Descriptive statistical measures are used for this purpose. Under descriptive statistics, measures of central tendency such as Mean, Median, and measures of dispersion such as Standard Deviation are used for further analysis of data.

*To assess the association between selected corporate governance mechanisms and IC disclosure level.*

One of the main objectives of this study is to explore the association between selected corporate governance mechanisms and intellectual capital disclosure. Thus, Correlation analysis and Ordinary Least Square Regression analysis under Inferential Statistics are performed for this purpose.

A Correlation analysis is performed to measure the strength and the direction of the relationship between corporate governance mechanisms and intellectual capital disclosure. Whereas, a Regression analysis is used to predict the relationship among dependent and independent variables.

In the regression model, IC disclosure is used as the dependent variable whereas, the board size, independent non-executive directors, CEO duality, and block-holder ownership are used as independent variables. Moreover, company size, company leverage, and company performance are used as control variables.

The regression equation is as follows:

$$IC_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 INDNE_{it} + \beta_3 ROLE_{it} + \beta_4 BLOCK_{it} + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \beta_7 ROA_{it} + \varepsilon$$

Note 2: Definitions of the above variables are given in Table 2.

## 4 ANALYSIS AND DISCUSSION

Firstly, this section elaborates the results of descriptive statistics in measuring the level of corporate governance and level of intellectual capital disclosure. Subsequently, correlation analysis and regression analysis are performed to recognize the association among dependent, independent, and control variables and to identify the direct relationship between corporate governance variables and intellectual capital disclosure. Finally, the section provides a summary of the results of the analysis performed.

### 4.1 Descriptive Statistics

Since the measures of central tendency under descriptive statistics such as Mean, Median, Standard Deviation, Skewness, and Kurtosis, are important to obtain an idea of the variables considered in a study, Table 4 below shows the descriptive statistics for all the variables (dependent, independent and control) used.

**Table 4: Descriptive statistics for dependent, independent, and control variables**

| Variables      | N  | Min.   | Max.   | Mean   | Median | SD    | Skewness | Kurtosis |
|----------------|----|--------|--------|--------|--------|-------|----------|----------|
| $IC_{it}^b$    | 80 | 0.167  | 0.500  | 0.324  | 0.333  | 0.097 | 0.221    | -0.859   |
| $BSIZE_{it}^b$ | 80 | 5.000  | 12.000 | 8.190  | 8.000  | 1.982 | 0.334    | -0.607   |
| $INDNE_{it}^b$ | 80 | 0.250  | 0.600  | 0.388  | 0.375  | 0.093 | 0.844    | 0.311    |
| $ROLE_{it}^b$  | 80 | 0.000  | 1.000  | 0.230  | 0.000  | 0.420 | 1.342    | -0.204   |
| $BLOCK_{it}^b$ | 80 | 0.630  | 0.947  | 0.806  | 0.815  | 0.096 | -0.281   | -0.956   |
| $SIZE_{it}^b$  | 80 | 12.845 | 18.675 | 15.706 | 15.630 | 1.093 | 0.126    | -0.212   |
| $LEV_{it}^b$   | 80 | 0.012  | 0.717  | 0.316  | 0.297  | 0.223 | 0.251    | -1.127   |
| $ROA_{it}^b$   | 80 | -0.007 | 0.291  | 0.100  | 0.082  | 0.084 | 0.861    | 0.001    |

<sup>a</sup> Definitions of these variables are indicated in Table 2.

<sup>b</sup> These variables were winsorized at 5% due to the presence of outliers.

IC disclosure ( $IC_{it}$ ) is the key-dependent variable of the study. The main indicator used to measure the level of IC disclosure is created using the intellectual capital disclosure index. As per Table 4, the mean value of the index amounts to 32.4% while the median value amounts to 33.3%. However, there is a standard deviation of 9.7% regarding IC disclosure in listed companies in Sri Lanka where the lowest disclosure rate is 16.7% while the maximum disclosure rate is 50%.

In terms of descriptive statistics for corporate governance variables, Table 4 shows that board size ( $BSIZE_{it}$ ) ranges from 5 to 12 directors, with a mean of 8. This further indicates that the average board size of Sri Lankan companies is within the effective board size recommended by Lipton and Lorsch (1992). These results also depict that on average, boards consist of 38.8% independent non-executive directors ( $INDNE_{it}$ ), ranging from 25% to 60%. Furthermore, in 23% of companies, the CEO is also the chairman of the company which confirms low duality ( $ROLE_{it}$ ), and therefore such low duality is observed to be a predominant characteristic of Sri Lankan boards. Concerning the ownership concentration, Table 4 depicts that the mean percentage of block-holders ( $BLOCK_{it}$ ) is 81%.

The average firm size ( $SIZE_{it}$ ) in terms of the natural logarithm of total assets is 15.706 with a standard deviation of 1.093 while the mean value of leverage ( $LEV_{it}$ ) is 0.316 with a standard deviation of 0.223. These descriptive statistic results show that the sample companies are maintaining a low debt ratio compared to their total assets.

## 4.2 Relationship Between Selected Corporate Governance Variables and Intellectual Capital Disclosure

One of the main research objectives of this research study is to examine the relationship between selected corporate governance variables and intellectual capital disclosure. Accordingly, this section discusses the results of the correlation and regression analyses performed.

### 4.2.1 Correlation analysis

Pearson's bivariate correlation shows the strength and the direction of a relationship between two variables and Table 5 presents the results of this bivariate analysis, for all variables included in the analysis of the relationship between corporate governance variables and intellectual capital disclosure.

Based on the Pearson correlation analysis results indicated in Table 5, company size ( $SIZE_{it}$ ) shows a significant positive correlation with intellectual capital disclosure ( $IC_{it}$ ) (at  $p < 0.01$  level) whereas board size ( $BSIZE_{it}$ ), independent non-executive directors ( $INDNE_{it}$ ), company leverage ( $LEV_{it}$ ), company performance ( $ROA_{it}$ ), CEO Duality ( $ROLE_{it}$ ) and Block-holder ownership ( $BLOCK_{it}$ ) do not indicate a significant correlation with intellectual capital disclosure ( $IC_{it}$ ) (at  $p < 0.01$  level).

**Table 5: Correlation matrix**

| Variables <sup>a</sup> | 1       | 2      | 3      | 4     | 5        | 6      | 7     | 8 |
|------------------------|---------|--------|--------|-------|----------|--------|-------|---|
| 1. $IC_{it}$           | 1       |        |        |       |          |        |       |   |
| 2. $BSIZE_{it}$        | 0.192   | 1      |        |       |          |        |       |   |
| 3. $INDNE_{it}$        | 0.126   | -0.022 | 1      |       |          |        |       |   |
| 4. $ROLE_{it}$         | -0.002  | -0.112 | 0.237* | 1     |          |        |       |   |
| 5. $BLOCK_{it}$        | -0.192  | -0.163 | -0.069 | 0.147 | 1        |        |       |   |
| 6. $SIZE_{it}$         | 0.402** | 0.145  | 0.254* | 0.139 | -0.299** | 1      |       |   |
| 7. $LEV_{it}$          | 0.110   | -0.060 | -0.058 | 0.016 | 0.116    | 0.085  | 1     |   |
| 8. $ROA_{it}$          | 0.104   | -0.050 | 0.062  | 0.011 | 0.233*   | -0.030 | 0.143 | 1 |

\* $p < .05$ , \*\* $p < .01$

<sup>a</sup> Definitions of these variables are indicated in Table 2.

### 4.2.2 Linear regression analysis

To identify the direct relationship between corporate governance and intellectual capital disclosure, the Regression model has been used to evaluate the hypotheses established in this study. Table 6 illustrates the results of the Regression analysis performed to analyze the relationship between selected corporate governance mechanisms and intellectual capital disclosure where corporate governance mechanisms were the independent variables and intellectual capital disclosure was the dependent variable.

**Table 6: Coefficients<sup>a</sup>**

| Variables <sup>b</sup> | B       | Std. Error | t      | Sig.  | Collinearity Statistics |       |
|------------------------|---------|------------|--------|-------|-------------------------|-------|
|                        |         |            |        |       | Tolerance               | VIF   |
| (Constant)             | -0.170  | 0.209      | -0.814 | 0.418 |                         |       |
| $BSIZE_{it}$           | 0.007   | 0.005      | 1.248  | 0.216 | 0.946                   | 1.057 |
| $INDNE_{it}$           | 0.041   | 0.117      | 0.350  | 0.727 | 0.878                   | 1.139 |
| $ROLE_{it}$            | -0.007  | 0.026      | -0.290 | 0.773 | 0.887                   | 1.127 |
| $BLOCK_{it}$           | -0.102  | 0.118      | -0.860 | 0.392 | 0.806                   | 1.241 |
| $SIZE_{it}$            | 0.031** | 0.010      | 2.953  | 0.004 | 0.807                   | 1.240 |
| $LEV_{it}$             | 0.037   | 0.047      | 0.784  | 0.435 | 0.946                   | 1.057 |
| $ROA_{it}$             | 0.151   | 0.127      | 1.190  | 0.238 | 0.923                   | 1.084 |

|                 |       |
|-----------------|-------|
| F value         | 2.755 |
| Sig. of F value | 0.140 |
| R <sup>2</sup>  | 0.211 |
| N               | 80    |

<sup>a</sup> Dependent Variable:  $IC_{it}$ , \* $p < .05$ , \*\* $p < .01$ .

<sup>b</sup> Definitions of these variables are indicated in Table 2.

As depicted in Table 6, the  $R^2$  value indicates that 21 percent of the variation in intellectual capital disclosure could be explained using the selected corporate governance variables along with control variables. Results of the regression analysis show that company size ( $SIZE_{it}$ ) has a systematic relationship ( $p < 0.01$ ) with the intellectual capital disclosure ( $IC_{it}$ ). According to the results presented in Table 6, a significant positive relationship can be identified between company size ( $SIZE_{it}$ ) and IC disclosure ( $IC_{it}$ ). This positive and statistically significant (at  $p < 0.01$ ) estimated coefficient of company size ( $SIZE_{it}$ ) indicates that when the size of a company is increasing, that company tends to have a higher level of intellectual capital disclosure. This result is consistent with the previous studies reviewed under the literature section.

However, according to the regression results presented in Table 6, other variables do not have a significant association with intellectual capital disclosure (at  $p < 0.01$  level).

### 4.3 Discussion

The first objective of this study was to assess the degree of intellectual capital disclosure and corporate governance in non-financial listed companies in Sri Lanka. Consistent with previous studies, a content analysis was used to identify the level of Intellectual Capital disclosure in non-financial listed companies in Sri Lanka (Guthrie & Parker 1990, Hackston & Milne 1996). Descriptive statistics for IC disclosure level show that the average IC disclosure level of Sri Lankan non-financial listed companies is 32.4%. It was also identified that most of the Sri Lankan companies have not indicated IC disclosures in a separate section in their annual reports due to the lack of a proper theoretical framework. This finding is similar to the findings of Abeysekera and Guthrie (2005) where they identified a lack of a proper framework in annual reports of Sri Lankan firms. Thus, it was found that the presentation of intellectual Capital Disclosures in annual reports should be further improved with regards to listed entities in Sri Lanka.

A study conducted by Alfraih (2018) using companies listed in Kuwait Stock Exchange (KSE) concludes that the IC disclosure level for all KSE listed companies in 2013 was 28%. Whereas, another study conducted by Taliyang, Harun, and Mustafa (2014) using a sample of Malaysian companies indicate that 69% of the companies listed in Bursa Malaysia disclose intellectual capital in their annual reports. As there are methodological differences in these studies such as differences in sample size, the number of years covered, the composition of companies by industry sector, it was found difficult to compare IC disclosure levels between different countries. However, Guthrie and Petty (2000) in their study also highlighted that IC disclosure results are not comparable between nations due to the difference in fundamental assumptions and frameworks between countries.

Descriptive statistics for corporate governance variables indicate that board size ranges from 5 to 12 directors, with a mean of 8. This result is within the average effective board size recommended by Lipton and Lorsch (1992). Moreover, descriptive statistics results also indicate that on average, boards consist of 38.8% independent non-executive directors, ranging from 25% to 60%. Furthermore, in 23% of companies, the CEO is also the chairman of the

company which confirms low duality ( $ROLE_{it}$ ) is a predominant characteristic of Sri Lankan boards.

Concerning the ownership concentration, it was found that the mean percentage of block-holders ( $BLOCK_{it}$ ) is 81%. The average firm size ( $SIZE_{it}$ ) in terms of the natural logarithm of total assets is 15.706 with a standard deviation of 1.093 while the mean value of leverage ( $LEV_{it}$ ) is 0.316 with a standard deviation of 0.223. These descriptive statistics results show that the sample companies are maintaining a low debt ratio compared to their total assets.

The second objective of the research was to identify the relationship between selected corporate governance mechanisms (board size, proportion of independent non-executive directors, CEO duality, and block-holder ownership) and IC disclosure. Accordingly, four hypotheses were developed and tested.

H<sub>1</sub> hypothesizes that IC disclosure level is positively associated with the board size. The results presented in Table 6 show that while the coefficient of board size is positive, there is no significant relationship between board size and intellectual capital disclosure. Hence, the results do not support H<sub>1</sub>. This positive but non-significant association between board size and intellectual capital disclosure is not in line with the findings of Abeysekara (2010) who observed a significant positive association between board size and intellectual capital disclosure.

H<sub>2</sub> predicts that IC disclosure level is positively associated with the board independence (independent non-executive directors). The results presented in Table 6 do not support this prediction as it indicates a positive but non-significant association between IC disclosure and independent non-executive directors. Accordingly, a positive association between IC disclosure and independent non-executive directors also supports the findings of the prior literature discussed in the literature review section.

Concerning the relationship between IC disclosure level and CEO duality, H<sub>3</sub> hypothesizes that IC disclosure level is negatively associated with CEO duality. The results presented in Table 6 indicate that while the coefficient of CEO duality is negative, it is non-significant. Thus, the study results do not support this hypothesis. However, this finding is in line with the study conducted by Li et al. (2008) who observed a non-significant association between CEO duality and intellectual capital disclosure.

H<sub>4</sub> hypothesizes that IC disclosure level is positively associated with block-holder ownership. The results presented in Table 6 do not support this hypothesis as it indicates a non-significant association between block-holder ownership and IC disclosure level of non-financial listed companies in Sri Lanka. Moreover, contrary to most prior literature, the regression results show that block-holder ownership has a negative coefficient. Hence, these results do not support the H<sub>4</sub> hypothesis developed in the literature review section. Although previous literature in developed nations is contrary to the finding of this study, this result can be acceptable when considering the economic and social context in Sri Lanka. Most Sri Lankan companies are family-owned businesses where certain families hold a high proportion of shares in corporates. Due to this reason, management does not pay a high concern towards disclosures as those in control already have a sufficient amount of information to fulfill their informational needs. This situation might sometimes create an adverse impact on minority shareholders due to the low level of voluntary disclosure.

For the control variables, Table 6 indicates that company size has a significant positive association (at  $p < 0.01$  level). This suggests that large companies in Sri Lanka have a high level of intellectual capital disclosure. Moreover, this finding is in line with the findings of previous studies which indicate that larger companies tend to disclose IC information more frequently (Garcia-meca 2005, Petty & Cuganesan 2005). However, the results show that company leverage and company performance have a non-significant positive coefficient. Hence there is no significant association between these two control variables and IC disclosure.

## **5 CONCLUSION**

Currently, there is a huge transformation going on with the world economy from an industrial economy to a knowledge-based economy to boost wealth creation. As a result of these latest changes in the global economy, there is an increased concentration on intellectual capital (IC) disclosure. Corporate governance is one of the major factors that affect the extent of voluntary disclosure levels of corporates.

When analyzing both local and foreign literature, it was found that there is a dearth of studies on the impact of corporate governance mechanisms on IC disclosure. Therefore, considering the need to contribute to the extant literature, this study was conducted to understand the impact of selected corporate governance mechanisms on intellectual capital disclosure. Since Sri Lanka's voluntary disclosures are highly unregulated, this study also aimed to provide valuable insights to regulators to understand the implications of poor governance practices on firm transparency. The specific features of Sri Lankan companies add a different aspect to extant literature. Thus, the findings of this study provided new insights into the relationship between corporate governance mechanisms and IC disclosure.

This study mainly intended to accomplish two main objectives. They are, to assess the degree of selected corporate governance mechanisms (board size, proportion of independent non-executive directors, CEO duality block-holder ownership) and intellectual capital disclosure among non-financial companies listed on the CSE and to explore the relationship between selected corporate governance mechanisms and IC disclosure. Based on the literature reviewed and conceptual diagram developed, four research hypotheses were developed and tested to examine the relationship between selected corporate governance mechanisms (board size, proportion of independent non-executive directors, CEO duality block-holder ownership) and IC disclosure.

The first objective of this study was to assess the degree of intellectual capital disclosure and corporate governance in non-financial listed companies in Sri Lanka. It was identified that the average IC disclosure level of Sri Lankan non-financial listed companies is 32.4%. However, it was also found that there is a standard deviation of 9.7% on the IC disclosure in quoted public companies in Sri Lanka. The study findings also revealed that most of the Sri Lankan companies have not indicated IC disclosures in a separate section in their annual reports due to the lack of a proper theoretical framework. For the corporate governance mechanisms, it was found that the mean values of board size, independent non-executive directors, CEO duality, and block-holder ownership are as 8, 38.8%, 23%, and 81%, respectively.

The second objective of this study was to explore the relationship between selected corporate governance mechanisms (board size, proportion of independent non-executive directors, CEO duality block-holder ownership) and IC disclosure. Results of the correlation analysis, linear regression analysis showed that the company size has a significant impact on IC disclosure whereas other corporate governance mechanisms (board size, proportion of independent

non-executive directors, CEO duality block-holder ownership) do not have a significant impact on the IC disclosure.

Investors and other decision-makers always search for relevant and accurate information to reduce the risks associated with their decisions. Thus, the Sri Lankan government and other regulatory bodies should initiate new procedures to enhance their corporate governance structure to assure the general public. Disclosure of information on intellectual capital helps corporates to enhance their value, internal controls and gain a competitive advantage over other competitors. Thus, the findings of this study will provide useful guidelines for regulators, corporate managers, and shareholders about the impact of selected corporate governance mechanisms on the IC disclosure level in Sri Lanka.

This study also intended to minimize the IC research gap between developed and developing nations by contributing to existing literature. This gap has become a significant factor as developing nations have to compete with companies in developed countries due to globalization, more freely available capital, and lower transaction costs. Thus, the findings of this study will be very helpful to investors and other stakeholders to make more informed decisions.

As with any other research, this study also contains certain limitations such as limiting the sample to 80 listed companies in CSE based on market capitalization excluding banking, finance, and insurance companies. Thus, IC disclosure levels of banking, finance, and insurance companies and companies with a low market capitalization are not represented by this study. Since it takes a considerable amount of time to read and analyze annual reports to identify the IC disclosure level, the sample size of this study is limited to 80 non-financial listed companies and considers data only for one year. Thus, the small size of the sample might not demonstrate the actual scenario of the research topic in Sri Lanka. Therefore, future researchers can increase the sample size covering all industries to get more accurate results. Furthermore, this study has only considered a limited number of corporate governance attributes. Thus, future researchers can consider more attributes when conducting their research. In addition, data required for this study is only collected from the corporate annual reports which is a form of secondary data collection. This creates limitations in the index created as it will be created based on the data that can only be obtained by analyzing annual reports. Thus, future researchers can use primary data sources for their research. Furthermore, this study has considered only one researcher's perspective when determining the IC disclosure level. Thus, to increase the reliability of the calculated IC disclosure level, two or more researchers' perspectives should be considered. These research directions will provide more valuable insights on the impact of corporate governance mechanisms on intellectual disclosure.

## REFERENCES

- Abeysekera, I 2010, 'The influence of board size on intellectual capital disclosure by Kenyan listed firms', *Journal of Intellectual Capital*, vol. 11, no. 4, pp. 504-518.
- Abeysekera, I 2007, 'Intellectual capital reporting between a developing and developed nation', *Journal of Intellectual Capital*, vol. 8, no. 2, pp. 329-345.
- Abeysekera, I & Guthrie, J 2005, 'An empirical investigation of annual reporting trends of intellectual capital in Sri Lanka', *Critical Perspectives on Accounting*, vol. 16, no. 3, pp. 151-163.

- Abhayawansa, S & Azim, M 2014, 'Corporate reporting of intellectual capital: evidence from the Bangladeshi pharmaceutical sector', *Asian Review of Accounting*, vol. 22, no. 2, pp. 98-127.
- Akerlof, GA 1970, 'The market for 'lemons': quality uncertainty and the market mechanism', *The Quarterly Journal of Economics*, vol. 84, no. 3, pp. 488-500.
- Alcaniz, L, Gomez-Bezares, F & Ugarte, JV 2015, 'Firm characteristics and intellectual capital disclosure in IPO prospectuses', *Academia Revista Latinoamericana De Administracion*, vol. 28, no. 4, pp. 461-483.
- Alfraih, M 2016, 'Corporate governance mechanisms and audit delay in a joint audit regulation', *Journal of Financial Regulation and Compliance*, vol. 24, no. 3, pp. 292-316.
- Alfraih, M 2017, 'The value relevance of intellectual capital disclosure: empirical evidence from Kuwait', *Journal of Financial Regulation and Compliance*, vol. 25, no. 1, pp. 22-38.
- Alfraih, M 2018, 'The role of corporate governance in intellectual capital disclosure', *International Journal of Ethics and Systems*, vol. 34, no. 1, pp. 101-121.
- Alfraih, M, Alanezi, F & Alanzi, K 2015, 'Do the characteristics of the board of directors affect the value relevance of accounting information', *International Journal of Accounting and Finance*, vol. 5, no. 2, pp. 172-187.
- Azeez, D 2015, 'Corporate governance and firm Performance: evidence from Sri Lanka', *Journal of Finance and Bank Management*, vol. 3, no. 1, pp. 180-189.
- Bonazzi, L & Islam, S 2007, 'Agency theory and corporate governance: a study of the effectiveness', *Journal of Modelling in Management*, vol. 2, no. 1, pp. 7-23.
- Bozzolan, S, Favotto, F & Ricceri, F 2003, 'Italian annual intellectual capital disclosure: an empirical analysis', *Journal of Intellectual Capital*, vol. 4, no. 4, pp. 543-8.
- Brüggen, A, Vergauwen, P & Dao, M 2009, 'Determinants of intellectual capital disclosure: evidence from Australia', *Management Decision*, vol. 47, no. 2, pp. 233-245.
- Bukh, P, Nielsen, C, Gormsen, P & Mouritsen, J 2005, 'Disclosure of information on intellectual capital in Danish IPO prospectuses', *Accounting, Auditing & Accountability Journal*, vol. 18, no. 6, pp. 713-732.
- Cerbioni, F & Parbonetti, A 2007, 'Exploring the effects of corporate governance on intellectual capital disclosure: an analysis of European biotechnology companies', *European Accounting Review*, vol. 16, no. 4, pp. 791-826.
- Clemente, A & Labat, B 2009, 'Corporate governance mechanisms and voluntary disclosure: the role of independent directors in the boards of listed Spanish firms', *Journal of Financial Economics*, vol. 5, pp. 243-270.

- Cormier, D, Ledoux, M, Magnan, M & Aerts, W 2010, 'Corporate governance and information asymmetry between managers and investors', *Corporate Governance: The international journal of business in society*, vol. 10, no. 5, pp. 574-589.
- Detthamrong, U, Chancharat, N & Vithessonthi, C 2017, 'Corporate governance, capital structure and firm performance: evidence from Thailand', *Research in International Business and Finance*, vol. 42, no. 1, pp. 689-709.
- Donnelly, R & Mulcahy, M 2008, 'Board Structure, ownership, and voluntary disclosure in Ireland', *Corporate Governance: An International Review*, vol. 16, no.5, pp. 416-429.
- Elshandidy, T & Neri, L 2015, 'Corporate governance, risk disclosure practices, and market liquidity: comparative evidence from the UK and Italy', *Corporate Governance: An International Review*, vol. 23, no. 4, pp. 331-356.
- Eng, LL & Mak, YT 2003, 'Corporate governance and voluntary disclosure', *Journal of Accounting and Public Policy*, vol. 22, no. 4, pp. 325-345.
- Fama, E & Jensen, M 1983, 'Separation of ownership and control', *The Journal of Law and Economics*, vol. 26, no.2, pp. 301-325.
- Fauzi, F & Locke, S 2012, 'Board structure, ownership structure and firm performance: a study of New Zealand listed-firms', *Asian Academy of Management Journal of Accounting of Finance*, vol. 8, no. 2, pp. 43-67.
- Firer, S & Williams, SM 2005, 'Firm ownership structure and intellectual capital disclosures', *South African Journal of Accounting Research*, vol. 19, no. 1, pp. 1-18.
- Fung, B 2014, 'The demand and need for transparency and disclosure in corporate governance', *Universal Journal of Management*, vol. 2, no. 2, pp.72-80.
- Galbreath, J 2005, 'Which resources matter the most to firm success? An exploratory study of resource-based theory', *Technovation*, vol. 25, no. 9, pp. 979-987.
- Gan, K, Saleh, Z, Abessi, M & Huang, CC 2013, 'Intellectual capital disclosure in the context of corporate governance', *International Journal of Learning and Intellectual Capital*, vol. 10, no. 1, pp. 52-70.
- Garcia-Meca, E & Martínez, I 2005, 'Assessing the quality of disclosure on intangibles in the Spanish capital market', *European Business Review*, vol. 17, no. 4, pp. 305-313.
- Guthrie, J & Parker, LD 1990, 'Corporate social disclosure practice: a comparative international analysis', *Advances in Public Interest Accounting*, vol. 3, pp. 159-75.
- Guthrie, J & Petty, R 2000, 'Intellectual capital: Australian annual reporting practices', *Journal of Intellectual Capital*, vol. 1, no. 3, pp. 241-251.

- Guthrie, J, Petty, R, Yongvanich, K & Ricceri, F 2004, 'Using content analysis as a research method to inquire into intellectual capital reporting', *Journal of Intellectual Capital*, vol. 5, no. 2, pp. 282-293.
- Hackston, D & Milne, MJ 1996, 'Some determinants of social and environmental disclosures in New Zealand companies', *Accounting, Auditing and Accountability Journal*, vol. 9, no. 1, pp. 77-108.
- Haji, AA & Ghazali, NAM 2013, 'A longitudinal examination of intellectual capital disclosures and corporate governance attributes in Malaysia', *Asian Review of Accounting*, vol. 21, no. 1, pp. 27-52.
- Hidalgo, R, García-Meca, E & Martínez, I 2011, 'Corporate governance and intellectual capital disclosure', *Journal of Business Ethics*, vol. 100, no. 3, pp. 483-495.
- Huafang, X & Jianguo, Y 2007, 'Ownership structure, board composition and corporate voluntary disclosure: evidence from listed companies in China', *Managerial Auditing Journal*, vol. 22, no. 6, pp. 604-619.
- Jensen, M & Meckling, W 1976, 'Theory of the firm: managerial behavior, agency costs and ownership structure', *Journal of Financial Economics*, vol. 3, no. 4, pp. 305-360.
- Jensen, MC 1986, 'Agency cost of free cash flow, corporate finance, and takeovers', *American Economic Review*, vol. 76, no. 2, pp. 323-329.
- Jensen, MC 1993, 'The modern industrial revolution, exit, and the failure of internal control systems', *The Journal of Finance*, vol. 48, no. 3, pp. 831-880.
- Keenan, J & Aggestam, M 2001, 'Corporate governance and intellectual sapital: some conceptualisations', *Corporate Governance*, vol. 9, no. 4, pp. 259-275.
- Khalique, M, Nassir Shaari, J, Isa, A. & Samad, N 2012, 'Impact of intellectual capital on the organizational performance of Islamic banking sector in Malaysia', *SSRN Electronic Journal*, vol. 5, no. 2, pp. 1-20.
- Li, J 1994, 'Ownership structure and board composition: a multi-country test of agency theory predictions', *Managerial and Decision Economics*, vol. 15, no. 4, pp. 359-368.
- Li, J, Pike, R & Haniffa, R 2008, 'Intellectual capital disclosure and corporate governance structure in UK firms', *Accounting and Business Research*, vol. 38, no. 2, pp. 137-159.
- Lipton, M & Lorsch JW 1992, 'A modest proposal for improved corporate governance', *Business Lawyer*, vol. 1, pp. 59-77.
- Low, J & Cohen Kalafut, P 2001, 'The value creation index', *Strategy & Leadership*, vol. 29, no. 5, pp. 9-15.
- Manawaduge, A 2012, 'Corporate governance practices and their impacts on corporate performance in an emerging market: the case of Sri Lanka', Doctor of Philosophy thesis, School of Accounting and Finance, University of Wollongong, 2012.

- Manzaneque, M, Priego, A & Merino, E 2015, 'Corporate governance effect on financial distress likelihood: Evidence from Spain', *Revista de Contabilidad*, vol. 19, no. 1, pp. 111-121.
- McKinnon, J & Dalimunthe, L 2009, 'Voluntary disclosure of segment information by Australian diversified companies', *Accounting & Finance*, vol. 33, no. 1, pp. 33-50.
- Parker, L 2007, 'Financial and external reporting research: the broadening corporate governance challenge', *Accounting and Business Research*, vol. 37, no. 1, pp. 59-61.
- Petty, R & Cuganesan, S 2005, 'Voluntary disclosure of intellectual Capital by Hong Kong companies: examining size, industry and growth effects over time', *Australian Accounting Review*, vol. 15, no. 36, pp. 40-50.
- Roche, J 2005, *Corporate governance in Asia*, Routledge, Oxon.
- Rodrigues, LL, Tejedro-Romero, F & Craig, R 2016, 'Corporate governance and intellectual capital reporting in a period of financial crisis: evidence from Portugal', *International Journal of Disclosure and Governance*, vol. 14, no. 1, pp. 1-29.
- Rosenstein, S & Wyatt, JG 1990, 'Outside directors, board independence, and shareholder wealth', *Journal of Financial Economics*, vol. 26, no. 2, pp. 175-191.
- Senaratne, S 2011, 'Corporate Governance Reforms in Sri Lanka', *Sri Lanka Journal of Advanced Social Studies*, vol. 1, no.1, pp. 1-25.
- Sullivan, P 1998, 'Profiting from intellectual capital', *Journal of Knowledge Management*, vol. 3, no. 2, pp.132-143.
- Sveiby, K 1998, 'Intellectual capital: thinking ahead', *Australian CPA*, June, pp. 18-22.
- Sveiby, KE, Koehler, B & Francisco S 1997, *The New Organizational Wealth: Managing and Measuring Knowledge Based Assets*. Berett-Koehler Publisher, San Francisco.
- Sveiby, KE 1988, 'Den nya Årsredovisningen' [The New Annual Report] (in Swedish), Stockholm, Pub. details, see [www.sveiby.com.au](http://www.sveiby.com.au) for English translation.
- Taliyang, S, Harun, R & Mustafa, N 2014, 'Intellectual Capital Disclosure and Market Capitalization'. *International Journal of Business and Social Science*, vol. 5, no. 10, pp. 96-102.
- Tricker, B 2012, *Corporate governance principles, policies and practices*, Oxford University Press, New York.
- Uyar, A 2011, 'Determinants of corporate reporting on the internet: An analysis of companies listed on the Istanbul Stock Exchange (ISE)', *Managerial Auditing Journal*, vol. 27, no. 1, pp. 87-104.

- Vafaei, A, Taylor, D. & Ahmed, K 2011, 'The value relevance of intellectual capital disclosures', *Journal of Intellectual Capital*, vol. 12, no. 3, pp. 407-429.
- Welker, M 1995, 'Disclosure policy, information asymmetry, and liquidity in equity markets', *Contemporary Accounting Research*, vol. 11, no. 2, pp. 801-827.
- White, G, Lee, A & Tower, G 2007, 'Drivers of voluntary intellectual capital disclosure in listed biotechnology companies', *Journal of Intellectual Capital*, vol. 8, no. 3, pp. 517-537.
- Whiting, RH & Miller, JC 2008, 'Voluntary disclosure of intellectual capital in New Zealand annual reports and the hidden value', *Journal of Human Resource Costing & Accounting*, vol. 12, no. 1, pp. 26-50.
- Williamson, O 1981, 'The economics of organization: the transaction cost approach', *American Journal of Sociology*, vol. 87, no. 3, pp. 548-577.
- Xiao, JZ, Yang, H & Chow, CW 2004, 'The determinants and characteristics of voluntary internet-based disclosures by listed Chinese companies', *Journal of Accounting & Public Policy*, vol. 23, no. 3, pp. 191-225.
- Yi, A & Davey, H 2010, 'Intellectual capital disclosure in Chinese (mainland) companies', *Journal of Intellectual Capital*, vol. 11, no. 3, pp. 326-347.