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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يونيورسيتي إسلام انتارابغسا ملايسيا

RELATIONSHIP BETWEEN BOARD COMPOSITION AND COMPANY PERFORMANCE: ANALYSIS OF FINANCIAL AND INTELLECTUAL CAPITAL MEASURES

BY

AMILIA SYUHADA ABDUL MAJID

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Kulliyyah of Economics and Management Sciences
International Islamic University
Malaysia

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ABSTRACT

The board of directors (BOD) is expected to monitor and enhance company performance for the shareholders' and stakeholders' interests. However their interests are not mutually exclusive. Shareholders' return is mostly measured by financial returns whilst stakeholders' return is mostly measured by intellectual capital (IC) value added efficiency. IC is essential for the current knowledge-based economy as it creates and innovates new ideas which are important for company competitiveness and success. As such, this study analyzes the relationship of the BOD composition with company performance. BOD composition tested are directors' shareholding (DS), board chairman duality position, board size (BS) and outside directors (OD). Company performances tested are in terms of financial returns and company resources (physical and intellectual capital) value added efficiency (RVAE). Financial returns tested are return on assets (ROA), average turnover (ATO) and market capitalization over assets book value (MB). The RVAE is measured using the value added intellectual coefficient (VAIC) method. The sample covered 107 companies from the Main Board of Bursa Malaysia. The empirical regression analyses failed to find a significant relationship between BOD composition and company performance, except for DS and profitability. A statistically non-significant positive and negative relationship is noted for DS and duality position with company performance respectively. BS is non-significant positively associated with company performance except for MB's non-significant negative result. OD generates mixed results. OD is noted as non-significant positively related to the stakeholders' interest performance indicators (i.e. MB and IC value added efficiency) but non-significant negatively related to the shareholders' interest performance indicators (i.e. ROA, ATO and physical capital value added efficiency). Pearson correlation results of significant correlation between company resources and financial performances suggest that IC enhances a company's financial performance.

ملخص البحث

يتوقع من مجلس الإدارة أن يراقب، ويحسن أداء الشركة لفوائد حملة الأسهم، والسندات. مع ذلك فوائدهم ليست حصريا بالتبادل. إنّ عائد حملة الأسهم يقاس عادة بالعوائد المالية، بينما عوائد حملة السندات غالبا يقاس بفعالية القيمة المضافة لرأس المال المدروس وهو أساس لقاعدة المعرفة في النظام الاقتصادي الحالي، لأنه يخلق ويبتكر أفكار جديدة مهمة لمنافسه، ونجاح الشركة وعلى هذا, فالدراسة تحلل العلاقة بين مجلس الإدارة مع أداء الشركة. إن تشكيل مجلس الإدارة تم قياسه بإدارة المساهمين، رئيس مجلس الادارة ثنائي المنصب، حجم ا لمس ، ومديرون من الخارج. إن أداء الشركة تم قياسه من ناحية العوائد المالية، وفعالية موارد الشركة (رأس المال المدروس والطبيعي) ذات القيمة المضافة. والعوائد المالية تم قياسها بالعوائد على الموجودات ومعدل الدوران ورسملة السوق على القيمة الدفترية للموجودات. إن فعالية موارد الشركة ذات القيمة المضافة تم قياسها باستخدام طريقة القيمة المضافة لمعامل رأس المال المدروس. العينة غطت 107 شركة من مجلس إدارة بورصة ماليزيا، تحليل الانحدار فشل في إيجاد علاقة ذات دلالة إحصائية بين تشكيل مجلس الإدارة وأداء الشركة ما عدا إدارة المساهمين والربحية. العلاقة الإيجابية والسلبية ليست ذات دلالة إحصائية تم ملاحظتها لإدارة المساهمين والمنصب المزدوج مع أداء الشركة على التوالي. حجم ا لمس يرتبط إيجابياً بشكل ليس ذي دلالة إحصائية مع أداء الشركة ما عدا رسملة السوق على القيمة الدفترية للموجودات بالنتائج السلبية ليست ذات دلالة إحصائية. المدراء الخارجيين ولدوا نتائج مختلطة. المدراء الخارجيين تم ملاحظته على أنه يرتبط إيجابياً بشكل ليس ذي دلالة إحصائية بمؤشرات أداء فوائد حملة السندات (رسملة السوق على القيمة الدفترية للموجودات وفعالية القيمة المضافة لرأس المال المدروس). لكنه يرتبط سلبيا بشكل ليس ذي دلالة إحصائية بمؤشرات أداء فوائد حملة الأسهم (العوائد على الموجودات ومعدل دوران رأس المال الطبيعي، فعالية القيمة المضافة) إن نتائج الارتباط ذي الدلالة الإحصائية بين موارد الشركة والأداء المالي اقترح أن رأس المال المدروس يحسن من الأداء المالي للشركة.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it conform to acceptable standards of scholarly presentation and is fully adequate, in scope and quality as a dissertation for the degree of Master of Science in Accounting.

.....
Nazli Anum binti Mohd Ghazali
Supervisor

.....
Noraini binti Mohd Ariffin
Supervisor

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Science in Accounting.

.....
Hafiz-Majdi bin Abdul Rashid
Examiner

This dissertation was submitted to the Department of Accounting and is accepted as a partial fulfilment of the requirements for the degree of Master of Science in Accounting.

.....
Shahul Hameed bin Haji Mohamed Ibrahim
Head, Department of Accounting

This dissertation was submitted to the Kulliyyah of Economics and Management Sciences and is accepted as partial fulfilment of the requirements for the degree of Master of Science in Accounting.

.....
Jamil bin Osman
Dean, Kulliyyah of Economics
and Management Sciences

DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole or any other degrees at IIUM or other institution.

Name: Amilia Syuhada binti Abdul Majid

Signature..... Date.....

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Affirmed by Amilia Syuhada Abdul Majid

....

Signature Date

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LIST OF ABBREVIATIONS

AICRS	Austrian Intellectual Capital Research Center
ATO	Average turnover over book value of assets
BOD	Board of directors
BS	Board size
CEE	Capital employed efficiency
CEO	Chief executive officer
CFROTA	Cash flow return on total assets
CG	Corporate governance
DS	Directors' shareholding in the company the directors hold directorship
EPS	Earnings per share
e.g.	*exempli grantia*: for example
et al	*et alia*: and others
IASB	International Accounting Standard Board
IC	Intellectual capital
ICT	Information and communication technology
GAAS	Generally Accepted Accounting Standards
HC	Human capital
HCE	Human capital efficiency
MB	Market-to-book value ratio of net assets
MCCG	Malaysian Code on Corporate Governance
MP	Malaysian Plan
OECD	Organization for Economic Co-Operation and Development
OD	Outside directors
PC	Physical capital
PLC	Public Listed Company
RBT	Resource-based theory
ROA	Return on assets
ROE	Return on equity
ROI	Return on investments
RVAE	Company resources value added efficiency
R&D	Research and development
SC	Structural capital
SCE	Structural capital efficiency
ST	Sales turnover
TVAE	Total value added efficiency of company's resources utilization
TVAIC	Total value added efficiency of company's IC utilization
TVAPC	Total value added efficiency of company's physical capital utilization
VA	Value added
VAE	Value added efficiency
VAIC	Value added intellectual coefficient

CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

This study aims to provide empirical evidence on the board composition's influence/association towards company performance among companies listed on the Main Board of Bursa Malaysia. Company performances are in reference to the traditional financial measures (profitability, productivity and market valuation) and the value added[1] efficiency of company's resources (physical and intellectual capital) utilization. It is hoped that this study would enhance the literature on the association between corporate governance and intellectual capital being used as an alternative indicator for company performance besides the financial measures, specifically in the Malaysian context. In addition it is also hoped that the study would enhance the awareness of the importance of intellectual capital (IC) and its implementation in business operation which subsequently would improve company financial performance.

1.1 BACKGROUND OF THE STUDY

The board of directors as a means of corporate governance is expected to serve both the shareholders' and stakeholders' interest. However, their interests are not mutually exclusive. Most financial returns are viewed as the shareholders' interest, while intellectual capital value added efficiency is viewed as stakeholders' interest. A company can not succeed by consistently neglecting the expectations of its

[1] Value added refers to increase in wealth generated by the productive use of a firm's resources prior to allocation to shareholders, bondholders, workers and government (Ahmed Riahi-Belkaoui, 2003).

employees, customers, suppliers, creditors and communities (Gupta, Pike and Burgman, 2003), but neither can a company attract needed capital from equity markets if it fails to meet shareholders' expectations of a competitive returns (Gregory and Simms, 1999). However, according to Wheeler and Sillanpaa (1997), a company that maximizes its stakeholders' value normally indirectly maximizes its shareholders value, but not vice versa (cited in Gupta et al., 2003).

In addition, IC is highly valued in today's knowledge-based economy and increasingly interpreted as a signal of future earning capabilities (Roos and Roos, 1997; Ahmed Riahi-Belkaoui, 2003; Ow, 2006). The Brooking Institute (2003)'s survey indicates that in 1982, 62% of organization's market value come from tangible assets (such as machines, products and facilities) whilst the balance 38% come from intangible assets (such brand name, intellectual property and quality of workforce) (cited in Ow, 2006). Twenty years later, by 2002, the perception on sources of market value had almost totally flipped. Almost 80% of today's market value comes from intangible assets and 20% comes from tangible assets. The intangible assets/IC is what makes a company different from the other companies. It is because the knowledge of IC such as people skills and organizations of productions enables developments of technology and innovations. The technology developments and innovations contribute towards growth of productivity, greater competitiveness and superior company performance (Shapira, Youtie, Yogeesvaran and Jaafar, 2005). Hence, IC as the indicator of company performance is increasingly suggested by academicians (such as Bontis, Chua and Richardson, 2000; Ahmed Riahi-Belkaoui, 2003; Williams and Firer, 2003; Chen, Cheng and Hwang, 2005) as well as practitioners/business consultants (such as Gupta et al., 2003; Karp, 2003; Pulic, 2004).

Due to the above two reasons, this study attempts to analyze board of directors' relationship/influence towards company performance. The company performances tested are in terms of financial returns as well as company resources value added efficiencies. Analyzing financial returns with IC value added efficiencies enables the determination of whether board of directors has paid considerable attention towards IC value added efficiency, consistent with the current economic trend which has shifted towards the importance of IC.

1.2 MOTIVATIONS OF THE STUDY

Motivations of the study are twofold. Firstly, previous studies on the relationship between board composition and company financial performance (e.g. Rechner and Dalton, 1991; Barnhart et al., 1994; Agrawal and Knoeber, 1996; Baliga et al., 1996; Dalton et al., 1998; Dalton et al., 1999; Rhoades et al., 2001; Wood et al., 2003; Dulewicz and Herbert, 2004; Shamsul Nahar, 2004; Chang, 2004; Chiang, 2005) show non-consistent and mixed results. As such a new research direction may need to be established (Hermalin and Weisbach, 1991) as the use of financial ratios may not able to capture able to capture board and leadership roles in establishing the company's value (Shamsul Nahar, 2004). The IC importance has been greatly recognized in today's knowledge-based economy (refer to section 1.1). As such IC may be one of the alternative ways to access company performance (Bontis, 1998; Pulic, 2004) as it has the potential to be the primary wealth creator in most organizations (Karp, 2003; Starovic and Marr, 2003; Chen et al., 2005).

Secondly, is due to Value Added Intellectual Coefficient (VAIC) method developed by the Austrian Intellectual Capital Research Center (AICRS) that has gained great attention of researchers in many countries. Among the countries that

have empirically tested the method are South Africa, Sweden and the UK (Ho and Williams, 2003), Japan (Mavridis, 2004), Europe (Pulic, 2004), Greece (Mavridis and Kyrmizoglou, 2005) and Taiwan (Chen et al., 2005). Goh (2005) has also tested the method to measure the intellectual capital performance of commercial banks in Malaysia.

The model views company performance from value creation of the company's total resource-based assets, particularly the physical, human and structural capital. Ho and Williams (2003) and Mavridis (2005) indicate that the method is a simple and straightforward technique but excellent in highlighting the intellectual phenomenon in a "rational" (metric) way to the internal and external stakeholders.

Thus this study attempts to fill the gap in the literature in Malaysia by empirically exploring the association between corporate governance and company performance using the IC VAIC model besides the traditional financial indicators.

1.3 OBJECTIVES OF THE STUDY

The study has three objectives. The first objective is to examine the relationship between board composition and company performance using traditional financial measures. The second objective is to investigate the relationship between board composition and company performance in terms of companies' resources value added efficiency (RVAE) of physical and intellectual capital utilizations. The third objective is to compare the findings in respect of the association between board composition and financial performance and value added efficiency of company resources utilizations.

1.4 SIGNIFICANCE OF THE STUDY

Studies on intellectual capital can be divided into two streams (Petty and Guthrie, 2000). The first stream is to determine the process of creating and managing the intellectual capital while the second stream is to measure the intellectual capital. This study combines the two streams by empirically examining the relationship between corporate governance and intellectual capital performance. In order to highlight intellectual capital performance, the study compares the result with traditional financial performance indicators (profitability, productivity and market valuation).

The other significance of the study is mainly derived from the utilization of the RVAE in two aspects. Firstly, the study reviews company performance from the RVAE perspective. RVAE is a more comprehensive measurement as it refers to resource-based[2] and value-added views (Ahmed Riahi-Belkaoui, 2003). However, there are only a few studies, especially in Malaysia, using this measurement. Secondly, currently there is no study in Malaysia testing the relationship between corporate governance and company performance from the RVAE perspective. A more accurate idea of corporate governance and company performance is believed can be obtained by using RVAE instead of only looking at the traditional financial measures. As such, the study attempts to extend and fill the gap in the literature in this area.

1.5 ORGANIZATION OF THE CHAPTERS

This study is organized into seven chapters including this chapter. The first chapter provides an overview of the study, covering the background, motivation, objectives and significance of the study. Intellectual capital is the focal point and the new

[2] Resource-based view that a firm with tangible and intangible strategic assets will own competitive and profitable advantage, and thus gain better business performance.

element introduced in the study. Therefore, the second chapter defines and discusses the elements of intellectual capital. It also covers the emergence and development of intellectual capital studies. Subsequently, chapter two reviews the knowledge-based economy adopted by Malaysia which is driven by the IC contribution.

Chapter three reviews the literature in three main areas. Firstly, it reviews literatures on the association between corporate governance and company performance using the traditional financial measures such as return on equity (ROE), return on assets (ROA), return on investments (ROI), earning per shares (EPS), sales and profit margin. Secondly, it reviews the literature on company performance from the intellectual capital perspective. Thirdly, literature on the association between corporate governance and company performance from the intellectual capital perspective is reviewed.

Chapter four explains the theoretical framework and develops the research hypotheses of the study. Chapter five outlines the sample selection, measures of dependent variables, independent variables and control factors of the traditional financial measures and value added efficiency of company resources. It also indicates the statistical test used in this study.

Chapter six discusses the findings and analyses of the results in respect of the association between corporate governance and company performance from the traditional financial and value added efficiency of company resources measures respectively.

Finally, chapter seven concludes and underlines limitations of the study. It also highlights contributions of the study and offers some suggestions for future research.

CHAPTER 2

INTELLECTUAL CAPITAL (IC)

2.0 INTRODUCTION

Most valuable assets in the 21st century have shifted towards knowledge workers and their productivity rather than production equipment (Drucker, 1999). The knowledge-based economy[3] is mainly refers to the contribution of intellectual capital, particularly human capital. That is because the generation and exploitation of knowledge/intellectual capital is the key success to an organization's wealth creation. Wealth creation should not be referred to financial return to shareholders only but also value added to stakeholders and society as a whole.

This chapter is organized as follows. Section 2.1 defines and indicates the components of intellectual capital. Section 2.2 reviews the emergence and development of intellectual capital studies. Section 2.3 reviews the knowledge-based economy adopted by Malaysia. Finally, section 2.4 concludes the chapter.

2.1 DEFINITION AND CLASSIFICATION OF IC

Intellectual capital as defined by the Organization for Economic Co-operation and Development (OECD) 1999 is the economic value of two categories of intangible assets of a company; the organizational (structural) capital and human capital. Marr and Schiuma (2001) defined intellectual capital as a group of knowledge assets that most significantly contribute to an improved position of an organization by adding

[3] Knowledge-based economy refers to the production, distribution and utilization of knowledge (as well as creativity and innovation) is essential for the growth and wealth creation of the economy (Economic Planning Unit (2002), Prime Minister's Department).

value to key stakeholders (cited in Starovic and Marr, 2003). Pablos (2005) stated that intellectual capital is the difference between the market value of a firm and its book value. It also constitutes the knowledge-based resources that contribute to the competitive return of a firm and which are not recorded in the financial statements. As such in general IC refers to knowledge-based resources that create value and wealth to the company

Intellectual capital consists of human capital, structural capital and relational capital (Edvinsson, 1997; Bontis, 1998; Sveiby, 1998; Gupta et al., 2003; Marr, Gupta, Pike and Roos, 2003). Human capital represents the employees' competence (professional skills and education), experience, intellectual agility, creativity, attitude, values and social skills (Edvinsson, 1997; Sveiby 1998; Bontis et al., 2000).

Structural capital consists of innovation capital (such as patents and databases) and process capital (organizational charts, procedures and process). It also covers organization strategies, routines, the mission and vision of the company, the company's basic value and working systems (Bontis et al., 2000; Bozbura, 2004).

Relational capital encompasses the knowledge embedded in the organization relationship, be it with customers, suppliers, competitors, shareholders, partners, trade associations, society or government (Bontis, 1999; Bontis et al., 2000; Bozbura, 2004). Sveiby (1998) and Pablos (2002) also added brand names, trademarks and reputation or image, diffusion and networking, intensity, collaboration and connectivity.

The following Figure 2.1 illustrates the intellectual capital components.

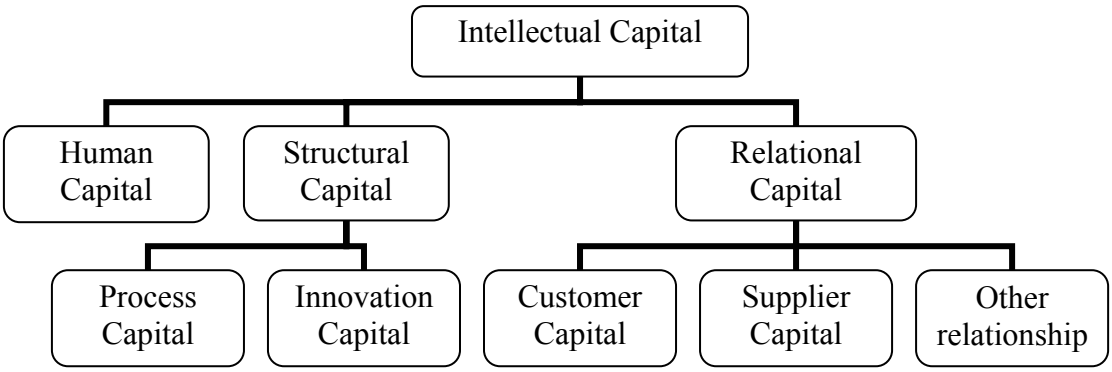

Figure 2.1: Intellectual capital components

2.2 EMERGENCE AND DEVELOPMENTS OF IC STUDIES

Intellectual or knowledge capital concept has actually emerged since man started business. However the in-depth intellectual capital management movement started in the 1980s. In 1980, Hiroyuki Itarni published "Mobilizing Invisible Assets" in Japanese. He studied the effect of invisible assets on the management of Japanese corporations.

In 1987, Karl-Erik Sveiby developed "the invisible balance sheet" in Sweden. It is to account for knowledge-based assets. The 'intangible assets monitor' framework measures and reports the knowledge capital. It is divided into internal structure, external structure and individual competence.

In 1990, Robert S. Kaplan and David P. Norton developed the "Balanced Scorecard (BSC)" in the US. The BSC was designed to focus managers' attention on factors that help the business strategy. Besides the financial measures, it added measures for customers, internal processes and innovations.

In 1993, Leif Edvinsson combined the intangible assets monitor framework with the BSC. He applied the BSC presentation format to the intangible assets monitor framework. The theory is called the 'Skandia Navigator' framework. The