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Intellectual Capital as the Essence of Sustainable Corporate Performance

Abdullah, D.F.,* Sofian, S. and Bajuri, N.H.

Department of Accounting and Finance, Faculty of Management, Universiti Teknologi Malaysia, Johor Bahru, Malaysia

ABSTRACT

The term 'intellectual capital' (IC) may sound unfamiliar to the wider public. However, IC has started to cast greater attention in the corporate world. IC refers to intangible asset which is closely related with the development of strategic decision and corporate performance. With endless challenging business environment and complicated electronic transactions, IC is argued to act as a vital essence for a business to innovate which then drives business sustainability. The ultimate purpose of this study was to investigate whether IC is acknowledged and managed towards improving performance, be it financial or non-financial performance. For this purpose, a questionnaire survey was distributed to the head of internal audit of Malaysian public listed companies. Questions tapping on core IC components including human capital, structural capital, relational capital and spiritual capital were included. Data were analysed using inference analysis methods, including ANOVA, t-test and regression. Findings revealed that IC does exist, but not much of IC management is sought in the companies, although the practice is in place. The results also demonstrate that relational capital emerged as the most influential IC component on corporate performance, while human capital ranked the last. This is an obvious indication that IC is well in fact has developed within Malaysian companies and become an important source for business performance.

Keywords: Human capital, intellectual capital, performance, relational capital, spiritual capital

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E-mail addresses:
dewifariha@utm.my (Abdullah, D.F.),
saudah@utm.my (Sofian, S.),
m-hairul@utm.my (Bajuri, N.H.)
* Corresponding author

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INTRODUCTION

The success of a business is constantly associated with the people and all available resources within the organisation. According to Bounfour (2003), intellectual capital (IC) is known as the resources of an

organisation which are valuable in building innovativeness and creativity to accelerate corporate competitiveness. IC empowers new knowledge, new innovations, competitive business strategies and help creates organisational values (Bontis *et al*., 2000; Bounfour, 2003; Tayles *et al*., 2007, Joshi *et al*., 2013). It indicates that the capability of valuing IC prepares companies with a platform to develop a competitive edge, innovativeness, sustainable business performance and will potentially be less affected by global economic crisis. With that in mind, it suggests that the strength of a business lies in its resources, be it human talent, skill, operating system, marketing strategy, and financial resources.

IC is an important asset that carries unconditional value in every organisation. Hence, a systematic way of managing IC is vital in order to provide a better decision making process which consequently helps to improve corporate performance (Bounfour, 2003; Marr, 2008, Maditinos *et al*., 2011). Likewise, according to Manton (2006), companies such as Dow Chemicals, IBM and Sony, generate revenue from strong company and product branding image. The importance of IC, specifically human capital, is explicitly highlighted in the Ninth Malaysian Plan and Tenth Malaysian Plan. In fact, the Malaysian 2012 budget with the theme "Transformational Nation" emphasised on utilising resources and development of human capital (Ninth Malaysia Plan 2006-2010, 2006; Tenth Malaysia Plan 2011-2015, 2010). Additionally, IC disclosures in companies report have started to gain reputation and increases in trend in Malaysia (Haji & Ghazali, 2011). This signals that IC elements and its development are vital in today's business and economic sustainability. IC is definitely a global phenomenon and mechanically Malaysia is part of it. The critical importance of valuing IC and how it could enhance business performance has been widely discussed. Nonetheless, less evidence is found on IC practices and IC management within Malaysian companies. In fact, Tayles *et al*. (2007) expressed their surprise when they discovered that Malaysian managers revealed that the term 'knowledge' is more common that the term 'intellectual capital' itself.

THE IMPORTANCE OF INTELLECTUAL CAPITAL

Realising the fact that the world is experiencing a revolving globalisation process and information age, IC is the dynamic of wealth creation which is more significant than the physical assets. Additionally, Guthrie (2001) states that the shift of attention from physical assets to intangible assets as company's core value drivers has also raised concern about the need to capture IC in the traditional accounting and management report. Indeed, IC is an ultimate powerful and valuable component that helps the company achieve its strategic objectives, improves its operation efficiency and boosts its market value (Marr, 2008; Maditinos *et al*., 2011). Inevitably, with strong characteristics of

all core IC components (human capital, structural capital and relational capital) or any other intangibles that it associates with, it is essential for companies to consistently acknowledge, measure, manage, report and utilise IC to its optimum with the aim to create value and competitive edge (Bontis *et al*., 2000; Joshi *et al*., 2013). Furthermore, with extensive IC management and utilisation, companies will not be vulnerable to economic pressures (Tayles *et al*., 2007). The stock of knowledge in the mind of employees and the organisation should not be wasted. Instead, it has to be effectively managed to the advantage of fostering corporate performance (Bontis, 1999; Maditinos *et al*., 2011). Undeniably, IC in an organisation is the key to corporate success; hence, it should not be left unnoticed.

Definition of Intellectual Capital

IC is commonly categorised into several components including human capital, structural capital and relational capital (Roos *et al*., 2005; Marr, 2008). Additionally, spiritual capital was added as a new component after considering the lack of evidence within the current literature incorporating spiritual capital as one vital element that shapes business success. More importantly, Zohar and Marshall (2004) and Malloch (2010) affirmed the view that any organisations having high spiritual capital have greater prospect at positioning themselves in achieving sustainable wealth, goals and vision. Hence, the inclusion of spiritual capital in this study is critically relevant.

Human capital is known as the attribute which is uniquely embedded in an individual and it cannot be transferred into a physical element (Roos *et al*., 2005). Generally, human capital includes individual's competency, experience, skills, expertise, attitudes, technological know-how, creativity, knowledge, education, innovativeness and adaptability (Bontis *et al*., 2000; Marr, 2008). Meanwhile, structural capital is regarded as an organisational stock of knowledge that includes systems, procedures, programmes, policies, distribution networks, organisational structure, corporate culture, business strategies and/or any resources that carry greater value that is different from its measurable value (Bontis *et al*., 2000; Marr, 2008). These values reside and are controlled by the organisation (Roos *et al*., 2005). The company utilises these resources as a guidance and reference in its operation in the course of achieving its goal.

Relational capital is described as the intangible values that an organisation possesses over time, between the organisation and external parties such as marketing channels, alliances, relationships with customer and suppliers, government agencies, industrial networking, joint ventures, investors and financiers (Tayles *et al*., 2007; Marr, 2008). Interestingly, spiritual capital came into sight in the recent years as an important value that should exist in individuals. In an organisation, if an individual or the company culture possesses high spiritual values such as

ethics, trusts, belief, faith, love, honesty, ethics, beliefs, commitment, desire and motivation, good management, honest financial reporting and business practice, an improved corporate performance is expected to follow (Zohar & Marshall, 2004; Rego & e Cunha, 2008; Long & Mills, 2010; Malloch, 2010). Nevertheless, Zohar and Marshall (2004) strongly underlined the mounting need to nurture spiritual capital, of which then a company (organization) with high spiritual capital becomes sustainable and evolutionary.

Intellectual Capital and Performance

Prominently, the topic entailing IC has received a considerable attention in Malaysia. The importance of human capital was enlightened in Chapter Eleven of the Ninth Malaysian Plan, which was announced in 2006. Malaysia, amidst of its technology shift and with the establishment of Malaysia's own multimedia super corridor (MSC) (Bontis *et al*., 2000), is seen as a sign that this country is moving forward to endeavour the country's economic development aggressively. A study on IC and business performance of Malaysian industries led by Bontis *et al*. (2000), among others, discovered that Malaysian senior managers (not indicative of sectors) are aware of the importance of IC, particularly human capital, which is important to capture market orientation and customers. Interestingly, IC and corporate performance were found to have a significant relationship regardless of the type of industry.

Another important study on IC, which was a case study on Telekom Malaysia Berhad (TMB) by Ismail *et al*. (2005) found that leveraging and managing IC, knowledge management and spiritual capital do have superior impacts on TMB's overall performance as compared to other types of capital. The findings also indicated the inability of TMB to manage and leverage IC to an optimum scale has contributed to the slow performance growth. Interestingly, the study by Tayles *et al*. (2007) on Malaysian companies revealed that the amount of IC investment is closely linked to management accounting practices, business performance and company's adaptability to counter the negative effects of market changes. Indeed, this study highlights that awareness among executives on the importance of IC in a company does exist. However, the practice of IC management and reporting is absent, making IC concept less explicit in Malaysian companies although IC is acknowledged to exist in the company and its employees.

The Resource-Based View Theory

The resource-based view (RBV) theory of a firm argues that a firm's resources instil competitive advantages, profitability and superior performance. Resources in this context include both tangible and intangible resources. The tangible resources are in physical form such as buildings, land, equipment, machineries and plant, while the intangible resources include knowledge, skilled employees,

patent, trademark, goodwill, corporate culture, efficient procedures, technological advancement and customer trust (Wernerfelt, 1984; Raja Ahmad *et al*., 2009). RBV began to emerge as highly significant in the 1990s, suggesting that higher financial performance and greater business success could be achieved when there is an effective management of the firm's stock of resources (Wernerfelt, 1984; Raja Ahmad *et al*., 2009). Indeed, RBV signifies that a company's resources have to be unique and superior of the competitors to create strategic values, and thus must be deployed in a systematic manner to achieve an improved performance.

Research Framework

The research framework adopted in this study is based mainly on the studies undertaken by Bontis *et al*. (2000) and also Tayles *et al*. (2007) with a modification of inserting spiritual capital which was initially introduced in a case study by Ismail *et al*. (2005). The aim of this study was mainly to examine whether IC (independent variable) influenced corporate performance (dependent variable) of companies in Malaysia. The research framework is illustrated in Fig.1 below.

The research questions (RQ) of this study are listed below:

RQ1: Is a company with high IC within a high IC industry and large in size?

RP1.1: Malaysian PLCs with high IC are within high IC industry.

RP1.2: Malaysian PLCs with high IC are large in size (total annual revenue).

RQ2: Does IC influence corporate performance of Malaysian PLCs?

RP2.1: IC influences corporate performance.

RP2.2: Human capital influences corporate performance.

RP2.3: Structural capital influences corporate performance.

RP2.4: Relational capital influences corporate performance.

RP2.5: Spiritual capital influences corporate performance.

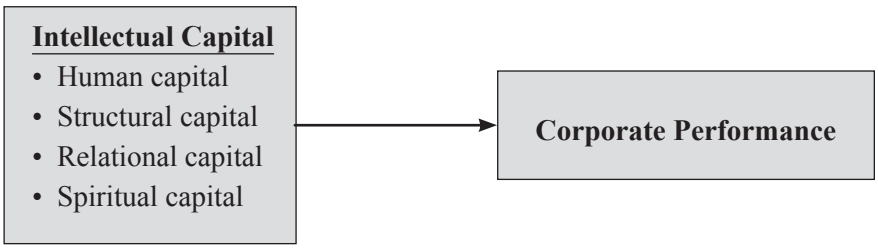

Fig.1: The Research Framework

RESEARCH METHODOLOGY

A quantitative approach was adopted in this study. Data were gathered using a questionnaire survey which was distributed to selected Malaysian PLCs using postal mail. The population, which refers to the entire group of the intended investigation (Sekaran, 2003), included all the publicly traded companies listed on the Malaysian Bourse stock market, with 857 companies in the total population. The head of internal audit of Malaysian PLCs is the targeted respondents to represent each company. They were selected on the basis of their professional background, extensive knowledge about the organisation's activities and exclusive authority to perform duties of internal auditing with important functions within the management of Malaysian PLCs. The respondents were required to rate their opinions based on the given statements using a 7-point Likert Scale ranging between 1 (strongly disagree) to 7 (strongly agree). The quantitative data collected were analysed using the statistical analysis method using Statistical Packages for Social Sciences (SPSS) Version 16.0.

A reliability test using Cronbach's Coefficient Alpha was conducted to examine the reliability level of the data gathered. Consistent with Pallant (2007), from the analysis performed, the variables showed an alpha coefficient above 0.70, while an inter-item correlation value above 0.30 indicated that the overall result is satisfactory. Following that, a simple linear regression analysis was performed to determine the influence of an independent variable on a dependent variable (Hair *et al*., 2003). In this study, the regression analysis was aimed to examine the effects of IC on Corporate Performance. In this analysis to identify the influence of an independent variable on a dependent variable, R2 must show significant effect where the observed significance value is smaller than the significance level of 0.05 (Hair *et al*., 1998).

RESEARCH FINDINGS

Research Objective 1: To determine whether IC varies with corporate characteristics

This section elaborates the results for the mean differences of the four IC components which are human capital, structural capital, relational capital and spiritual capital against two selected demographic factors: type of industry and size of company (by revenue).

RP1.1: Malaysian PLCs with high IC are within high IC industry.

A comparison of the mean scores comparison between high IC and low IC industry is illustrated in Table 1. The T-test analysis conducted for human capital reveals that there is a significant difference in the score for high IC (M = 32.46, SD = 5.24) and low IC (M = 30.74, SD = 5.15); t (143) = 1.97, p = 0.05 (two-tailed). Nonetheless, the magnitude of the differences in the means (mean difference = 1.72, 95% CI: -.003 to 3.45) is rather small (eta squared = 0.025). As for structural capital, there is a significant difference in

the score for high IC (M = 55.54, SD = 7.64) and low IC (M = 51.49, SD = 8.35); t (143) = 3.02, p = 0.003 (two-tailed). The magnitude of the differences in the means (mean difference = 4.05, 95% CI: 1.40 to 6.69) is moderate (eta squared = 0.061). As for relational capital, there is no significant difference in the score for high IC (M = 44.60, SD = 6.29) and low IC (M = 43.34, SD = 6.08); t (143) = 1.22, p = 0.226 (two-tailed). The magnitude of the differences in the means (mean difference = 1.26, 95% CI: -.79 to 3.32) is small (eta squared = 0.01). This indicates that an overall, all Malaysian PLCs, regardless of industries, are not statistically different in the relational capital scores. Finally, for spiritual capital, there is a significant difference in the score for high IC (M = 44.10, SD = 6.62) and low IC (M = 41.78, SD = 6.34); t (143) = 2.13, p = 0.05 (two-tailed). The magnitude of the differences in the means (mean difference = 2.32, 95% CI: .16 to 4.47) is relatively small (eta squared = 0.031). This signifies that there is a statistical difference in the spiritual capital scores between high IC and low IC companies. The overall result reveals that the respondents' perception on the level of IC is high IC companies contain higher IC values.

TABLE 1
Results of T-test between High and Low IC Companies

Demographic Factor	HC	SC	RC	SPC
Type of Industry (High IC/ Low IC)	p= .05**	p= .003**	p= .266	p= .035**

Note: HC = Human Capital, SC=Structural Capital, RC = Relational Capital, SPC = Spiritual Capital, **p value < 0.05

RP1.2: Malaysian PLCs with high IC are large in size (annual revenue)

A one-way ANOVA was run to identify whether background (i.e., annual revenue) of a company has an impact on the perception of the respondents towards IC. The findings from the one-way ANOVA confirmed that there is no significant difference (p < 0.05) in IC between the income groups (F [4, 124] = 1.046, p = .386). The p value of .386 is more than the threshold significant p value of 0.05 or less. Hence, regardless of the level of revenue of companies, the respondents' perceptions on IC are similar across the income group. In other words, companies with high IC are not necessarily large in size (annual revenue). Therefore, the above proposition is not supported.

Research Objective 2: To Examine the Influence of IC on Corporate Performance.

Preliminary analyses were performed prior to regression analysis confirmed that there is no violation of the assumptions of normality, linearity and homoscedasticity. Therefore, the use of multivariate analysis in this study is appropriate.

RP2.1: IC influences corporate performance.

The findings presented in Table 2 revealed that all four components of the IC jointly explained 46.1% (Adjusted $R^2 = 0.461$) of the variance in corporate performance (F [1, 142] = 123.40, $p < 0.001$), which is considerably a higher effect. The size of the effect is in accordance with Cohen's guideline (Rosenthal & Rosnow, 2008). More importantly, the results confirms that IC has a significant influence on corporate performance of Malaysian PLCs.

TABLE 2
The Regression Analysis Results of IC and Corporate Performance

Variable	R^2	Adjusted R^2	F	Sig	Rank
IC on Corporate Performance	.465	.461***	123.40	.000	-
Human Capital on Corporate Performance	.284	.279***	56.22	.000	4
Structural Capital on Corporate Performance	.315	.311***	65.43	.000	3
Relational Capital on Corporate Performance	.529	.526***	159.46	.000	1
Spiritual Capital on Corporate Performance	.384	.380***	88.66	.000	2

Note: *** p value < 0.001

RP2.2: Human capital influences corporate performance.

Table 2 shows that human capital explains 27.9% (Adjusted $R^2 = 0.279$) of the variance in corporate performance (F [1, 142] = 56.22, $p < 0.001$), which is also categorised as a large effect size. The result verifies that high level of human capital does significantly influence on corporate performance of Malaysian PLCs. In other words, high level of human capital such as knowledge, expertise, innovativeness and skills does contribute to a higher corporate performance.

RP2.3: Structural capital influences corporate performance.

Findings in Table 2 reveal that 31.1% (Adjusted $R^2 = 0.311$) of the variance in corporate performance is explained by structural capital (F [1, 142] = 65.43, $p < 0.001$). This confirms the tested propositions where structural capital, which includes efficient operating system, policies and procedures, has a significant influence on corporate performance of Malaysian PLCs.

RP2.4: Relational capital influences corporate performance.

The results shown in Table 2 reveal that relational capital explained 52.6% (Adjusted $R^2 = 0.526$) of the variance in corporate performance (F [1, 142] = 159.46, $p < 0.001$). This result proves that relational capital also has a significant influence on the corporate performance of Malaysian PLCs, indicating that high relational capital (e.g., good relationship with customers, partners and stakeholders) will improve corporate performance.

RP2.5: Spiritual capital influences corporate performance.

Table 2 shows that spiritual capital explains 38.0% (Adjusted $R^2 = 0.380$) of the variance in corporate performance ($F [1, 142] = 88.66$, $p < 0.001$), and thus, the above proposition is supported. The R^2 value is adequate and well above large effect on the relationship examined. The findings disclose that spiritual capital (e.g., spiritual values like ethical values, commitment, determination and trust), which was introduced as a new IC component in this study, has a significant influence on the corporate performance of Malaysian PLCs.

DISCUSSION AND CONCLUSION

The findings of this study gauged various information on IC in Malaysian PLCs. The results revealed a compelling evidence of whether IC and its components do influence corporate performance of Malaysian PLCs. As for the first research question, the one-way ANOVA results disclosed that there are differences in the levels of human capital, structural capital and spiritual capital between high IC and low IC company categories. Therefore, it can be assumed that these three components may be prominent only in high IC companies and vice versa. Remarkably, relational capital does not show any difference between both categories which relay an indication that the level of relational capital is equally high across all Malaysian PLCs. On the other hand, the one-way ANOVA tested based on the income group of all companies showed no evidence of any significant difference between the IC level and income groups. It can be concluded that the level of IC has no association with the company's level of income, which also means that companies with high level of IC are not necessarily earning a very high income or companies with lower levels of IC may be earning more than those companies with higher IC. Overall, this finding indicates that companies within low IC categories such as construction, industrial products, infrastructure, plantation and properties are expected to possess lower IC level. This confirms the findings highlighted in the studies conducted by Bontis *et al*. (2000) and Tayles *et al*. (2007).

IC and Corporate Performance

The second research question seeks to investigate the influence of IC and each of its core components on corporate performance. Statistical analysis disclosed that IC and its core components do imposed positive impacts on the corporate performance of Malaysian PLCs. The overall regression results showed that IC explained 46.1% of the variance in the corporate performance, which is relatively high. Thus, this result signifies that IC has a strong influence on performance. This finding is consistent with the finding in studies engaged by Bontis *et al*. (2000), Ismail *et al*. (2005) and Tayles *et al*. (2007) which found that IC does positively affect organisational performance. Meanwhile, the finding on human capital is somehow inconsistent with the results from previous

studies which established that it has the strongest influence on corporate performance. Likewise, this resut also contradicts the findings revealed by Bontis *et al*. (2000) and Tayles *et al*. (2007), which indicated that human capital has the highest importance and most influential IC components in Malaysia. One plausible reason for this is perhaps there is a shift of trend on the degree of importance of human capital where relational capital becomes the focus of attention on attracting business, which thus improves business performance.

More importantly, the findings from this study indicate that relational capital turns out to have the highest influence on corporate performance while human capital falls last in the list. This is unlike past studies which labeled human capital as the most important component in any organisation. Therefore, this finding shows that relational capital values such as maintaining a continuous good relationship with suppliers and customers, allied partners and other stakeholders have become increasingly important. The emerging importance of relational capital indicates the greater need to keep customers at reach and stay close with them by understanding and attending to their needs. This is consistent with the statement emphasised by Bounfour (2003) on the critical importance of maintaining good affiliation and rapport with parties surrounding the business. With today's advanced technology and cyber settings, it is not surprising that the trend in reaching to the customers need has changed. Hence, in order to retain customers' trust and maintain good rapport with business partners or suppliers, a greater focus on relational capital is essential. This can be done by understanding customers' want and listening customers' or suppliers' comments.

Spiritual capital was introduced as a new component in this study. The decision to include spiritual capital was mainly because of the known strong value that the individual possess, which could infer a remarkable distinction in organisational performance. The findings indicate that higher spiritual capital means higher corporate performance. Surprisingly, spiritual capital turns out as the second most important component after relational capital. This new finding confirms the conception highlighted by Zohar and Marshall (2004) and Ismail *et al*. (2005) on how spiritual capital and spiritual intelligence could boost organisational wealth. Indeed, consistent with the RBV theory, companies that acknowledge and optimise their IC resources are expected to be able to attain sustainable performance and achieve business goals. Hence, it is time that Malaysian PLCs take a deeper thought and understand the concept of IC and IC management, and thus cultivate a culture of understanding IC and its practices as a vital concept in business.

Direction for Future Research

This study has forward the attention and need for future research that could further

enhance knowledge on IC. First and foremost, future research is encouraged to investigate the trend and changes of IC development in Malaysia. Past studies showed that it was human capital that became the most important IC component in the past years, whereas the current study revealed relational capital standout as the most influential among all IC components. It signals that this trend will probably change in several years to come. Hence, future research is encouraged to engage in a longitudinal study to offer a more holistic view and understand development of IC while observing its expansion in Malaysia. Additionally, since the sample focused on Malaysian PLCs with only in-house IAF, data gathered from the internal auditors cannot generalise the perception of all managers within Malaysian PLCs. As such, it is recommended that future research consider drawing together information from other managers such as the Human Resource Manager, Chief Executive Officer or Audit Committee members to explore more insightful views of IC and its direction for improvement. This can also be extended with in-depth interviews with the managers.

CONCLUSION

IC concept is accepted in Malaysia PLCs, however, the practice of IC management has not shown an optimum development. Part of the reason stems from lack of IC expertise, whereas establishing an IC management system requires huge investment which some company may not willing to do. Despite the lack of IC experts, the overall results indicate that higher IC forces higher corporate performance, be it financial or non-financial performance. These findings appear as vital evidence that IC resides within Malaysian companies. Likewise, consistent with the growth and diversity of business activities and the environment, IC is increasingly being acknowledged, and it should be promoted in business organisations, particularly Malaysian PLCs. The heightened focus on relational capital and spiritual capital has also shown a changing pattern on the mounting importance of these two components, leaving human capital as the last in rank. This could be due to the evolution in the current awareness on the importance of the knowledge economy and advanced technology in today's business world practice. Today's business trend and how it is managed have changed; hence, this urges companies to start recognising any possible IC components available in the organisation. Values such as knowledge, experience, innovativeness, creativity, technology, a solid operation system, reputation, communication skills, honesty, integrity and empathy should all be nurtured, gathered, organised, utilised and managed in a systematic approach by employing an IC management system to achieve utmost sustainable business goals and success.

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