UNIVERSITI PUTRA MALAYSIA

INTELLECTUAL CAPITAL REPORTING AND STOCK PERFORMANCE IN MALAYSIA

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By

RAJESWARY BALARAMAN

Thesis Submitted to the Graduate School of Management,
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Requirement for the Degree of Master of Science

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Dedicated to my beloved son ………..

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in partial fulfillment of the requirement for the degree of Master of Science

INTELLECTUAL CAPITAL REPORTING AND STOCK PERFORMANCE IN MALAYSIA

By

RAJESWARY BALARAMAN

July 2007

Chair :   **Associate Professor Dr. Foong Soon Yau**

Faculty :   **Graduate School of Management**

Recently, many companies have shown interest in reporting intellectual capital to establish an understanding and to provide disclosure of the central growth factors of the company. This is to achieve a more effective management as well as to increase the company's value.

The first objective of this study is to examine the extent of voluntary intellectual capital reporting among the Malaysian companies and how such reporting may be associated with certain organisational attributes, such as industry sector, size and profitability. The second objective is to analyse whether the extent of voluntary intellectual capital reporting has any impact on the stock performance of the companies, in respect of market-to-book ratio and abnormal return upon issuance of annual report.

A total sample of 60 companies was selected from the list of 100 largest companies (by market capitalisation) as at December 2003. Content analysis was used to measure the extent of voluntary intellectual capital reporting based on 2003 annual reports of the selected companies. Data was analysed using 'ANOVA' and 'Linear Regression Analysis'.

The result shows a low level of voluntary intellectual capital reporting among the Malaysian companies. Structural capital is extensively disclosed, followed by relational capital and human capital. Companies in the trading and services sector disclose extensively information about their intellectual capital attributes, followed by finance sector and the manufacturing sector. On the whole, there are some significant differences in the extent of intellectual capital reporting among the industry sectors.

The linear regression result shows that there is a positive relationship between company size and the extent of voluntary intellectual capital reporting; evident only among the large-sized companies. On the other hand, company's profitability has positive relationship with extent of voluntary intellectual capital reporting only among the small-sized companies. For medium-sized and large-sized companies, the company's profitability does not have relationship with the extent of voluntary intellectual capital reporting.

It is believed that the extent of voluntary intellectual capital reporting in the annual reports will impact the company's market-to-book ratio and abnormal return. The analysis shows that only among the small-sized companies, the extent of voluntary intellectual capital reporting has marginal impact on the market-to-book ratio on the 1st week upon receipt of the annual report. On the other hand, there is no impact of extent of voluntary IC reporting on the abnormal return.

Companies should be encouraged to disclose their intellectual capital in order to be more informative to the investors. More studies on intellectual capital reporting can help to determine the level of intellectual capital among the Malaysian companies. The research on intellectual capital is still in an inchoate stage. Therefore, as more research is done in this area, more ideas can be developed to enhance the quality of research in intellectual capital in future.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi sebahagian keperluan untuk ijazah Master Sains

LAPORAN MODAL INTELEKTUAL DAN PRESTASI SAHAM DI MALAYSIA

Oleh

RAJESWARY BALARAMAN

Julai 2007

Pengerusi :   **Professor Madya Dr. Foong Soon Yau**

Fakulti :   **Sekolah Pengajian Siswazah Pengurusan**

Kebelakangan ini, banyak syarikat menunjukkan minat terhadap laporan modal intelektual untuk mewujudkan pemahaman dan memberi pendedahan ke atas faktor-faktor pengembangan sesebuah syarikat. Ini adalah untuk mencapai pengurusan yang lebih efektif dan peningkatan nilai syarikat.

Objektif pertama kajian ini adalah untuk mengkaji tahap laporan sukarela bagi modal intelektual oleh syarikat-syarikat di Malaysia dan hubungan ciri-ciri syarikat terhadap tahap laporan. Di antara ciri-ciri syarikat yang dianalisa adalah sektor industri, saiz syarikat dan keuntungan syarikat. Objektif kedua adalah untuk menyelidik sama ada tahap laporan sukarela bagi modal intelektual mempunyai impak ke atas prestasi saham syarikat, dari segi nisbah nilai pasaran/nilai buku dan pulangan abnormal selepas penghantaran laporan tahunan.

Sebanyak 60 syarikat telah dipilih dari senarai '100 Syarikat Teratas dari Segi Permodalan Pasaran' (Top 100 Companies by Market Capitalisation) pada bulan Disember 2003. Analisis Kandungan (Content Analysis) telah digunakan untuk mengira tahap laporan sukarela bagi modal intelektual berdasarkan Laporan Tahunan 2003 bagi syarikat-syarikat yang terpilih. Data dianalisa dengan menggunakan kaedah Analisis Varians (Variance Analysis) dan Regresi Linear (Linear Regression).

Kajian menunjukkan bahawa tahap laporan sukarela bagi modal intelektual adalah masih di tahap yang rendah. Modal struktur dilaporkan agak tinggi dan ini diikuti oleh modal hubungan dan modal manusia. Syarikat-syarikat dari sektor perdagangan dan perkhidmatan mempunyai tahap laporan sukarela bagi modal intelektual yang tinggi, diikuti oleh sektor kewangan dan sektor perkilangan. Pada keseluruhan, didapati bahawa tahap laporan sukarela bagi modal intelektual adalah berbeza mengikut industri sektor.

Keputusan Regresi Linear menunjukkan bahawa saiz syarikat mempunyai hubungan positif terhadap tahap laporan sukarela bagi modal intelektual, di mana ini terbukti bagi syarikat-syarikat bersaiz besar. Manakala, keuntungan syarikat mempunyai hubungan positif terhadap tahap laporan sukarela bagi modal intelektual hanya untuk syarikat-syarikat bersaiz kecil. Keuntungan syarikat tidak mempunyai hubungan terhadap tahap laporan sukarela bagi modal intelektual. bagi syarikat-syarikat bersaiz sederhana dan bersaiz besar.

Adalah dipercayai bahawa tahap laporan sukarela bagi modal intelektual mempunyai impak terhadap nisbah nilai pasaran/nilai buku dan prestasi saham. Kajian menunjukkan bahawa hanya untuk syarikat-syarikat bersaiz kecil, tahap laporan sukarela bagi modal intelektual mempunyai impak yang agak marginal terhadap nisbah nilai pasaran/nilai buku pada minggu pertama selepas penerimaan laporan tahunan. Manakala, tahap laporan sukarela bagi modal intelektual tidak mempengaruhi pulangan abnormal.

Syarikat-syarikat patut digalakkan untuk melaporkan modal intelektual supaya menjadi lebih informatif kepada para pelabur. Lebih banyak kajian tentang laporan modal intelektual dapat menolong untuk menentukan tahap modal intelektual bagi syarikat-syarikat di Malaysia. Di dapati bahawa kajian dalam bidang modal intelektual masih lagi di tahap tinjauan. Oleh itu, dengan mengendalikan lebih banyak kajian dalam bidang ini, ia dapat memberi idea-idea yang baru untuk meningkatkan lagi tahap kajian modal intelektual pada masa yang akan datang.

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Even though this project report carries my name, but the carefully tailored inputs and enthusiastic support of many have gone into the preparation of this material.

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I certify that an Examination Committee met on **3 May 2007** to conduct the final examination of **Rajeswary Balaraman** on her **Master of Science** thesis entitled **"Intellectual Capital Reporting and Stock Performance in Malaysia"** in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:
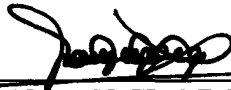
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This thesis submitted to the Senate of Universiti Putra Malaysia has been accepted as partial fulfillment of the requirement for the degree of Master of Science. The members of the Supervisory Committee are as follows: -

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DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

Rajeswary

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Date: 2 July 2007

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CHAPTER 1

INTRODUCTION

The Introduction chapter discuss the definition of intellectual capital (IC)[1] and the importance of IC in recent years. The objectives of reporting IC and the advantages to the company are highlighted as well. The research problem and objectives of the study are justified in this chapter.

1.1 Overview of Intellectual Capital

IC is an important topic that rarely has been studied or understood until the early 1990s. IC is now being identified as key intangible resources in organisations and a critical success factor, not only for knowledge intensive organisations, but also for most other organisations.

Companies are motivated to measure their IC for competitive benchmarking exercises and to create a consciousness within their organisations that IC does matter, as well as to provide this structured information to the capital and labour markets to enhance external perceptions of these organisations. In the present competitive climate, knowledge has become the most important fact of economic life. Knowledge and other intangible assets have contributed to a large part of a

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1. Intellectual Capital is referred as IC thereafter in the research paper.

company's value and become the main distinguishing factor of business success, as being seen as the foundation of its competitive advantage.

Dzinkowski (2000) opines that IC is a relatively new and an enigmatic concept, relating primarily to the intangible, highly mutable assets in the firm. As such, the current accounting model does not adequately capture their value nor represent them in a concise, meaningful format. Traditional accounting measures do not describe where the changes in the organisation need to occur; they only describe what happened in the past. It also does not have precise methodologies for placing a value on intangible assets like policies and procedures, the knowledge of staff and relationships with customers.

Accounting for IC will ultimately require the invention of new financial and management accounting concepts and practices. Intellectual capital accounts are not a short-term affair, instead it can be used to show path to create competencies in a long run basis. It also helps to create visibility in a society where thoughts of knowledge, innovation and change are key words to its financial survival. Publication of the intellectual capital accounts is also directed towards the employees signifying that they are also part of the corporate life.

1.2   Definition of Intellectual Capital

IC can be defined in different ways. The following are definitions by various researchers:

- "IC is intellectual material that has been formalised, captured and leveraged to produce a higher-valued assets." (Klein and Prusak, 1994 in Brennan, 2001).

- IC refers to assets and skills, where assets are formalised and captured intellectual capital such as patents, trademarks, copyrights, databases and contracts, and skills or competencies refer to tacit knowledge such as expertise of employees, suppliers and distributors (Hall, 1992).

- IC of a company refers to its possession of the knowledge, applied experience, organisational technology, customer relationships and professional skills that provides it with a competitive edge in the market (CIMA, 2003).

- IC defined as "the economic value of two categories of intangible assets of a company", that is organisational and human capital. Organisational capital refers to proprietary software systems,

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distribution networks and supply chains and human capital refers to human resources within the organisation and resources external to the organisation, namely customers and suppliers (OECD, 1999).

- IC is the term given to the combined intangible assets of market, intellectual property, human-centred and infrastructure, which enable the company to function (Brooking, 1996 in Bontis *et .al*, 2000).

- IC is intellectual material that is knowledge, information, intellectual property, and experience which can be put to use to create wealth (Stewart, 1997)

Among all the definitions stated above, one of the most workable definitions of IC is that offered by CIMA (2003). It is the intellectual material – knowledge, information, intellectual property, and experience that can be put to use to create wealth. Knowledge being the new engine of an organisation's development has become of great importance in recent years. Companies tend to be those that continually innovate, relying on new technologies and the skills and knowledge of their employees rather than assets such as plants or machinery.

According to CIMA (2003), IC often mistakenly used synonymously with intellectual property such as patents, trademarks and copyrights, which is only one aspect of it. IC can be both the end result of a knowledge transformation

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process or, the knowledge itself that is transformed into intellectual property or intellectual assets of a company. On the other hand, intellectual assets are knowledge-based items that a company possesses that produce a stream of future benefits.

1.3 Tangible Assets and Intellectual Capital

IC as a new performance driver is different in some important ways. In terms of comparison, tangibles are scarce commodities. For example, the amount of land available for industrial use is limited. It cannot be increased regardless of how much is needed or sought. Tangibles also can be transferred and re-possessed. It is possible to re-claim it or buy it back from the person it was sold. However, IC has a different set of characteristics. They are not necessarily scarce, can be used without being consumed, can be sold or transferred but still be retained and cannot be re-possessed.

For instance, knowledge is rising in value at the same time as it is increasing in magnitude. The number of people who have some particular knowledge or the ability to use it may be scarce. But if the knowledge is used for one purpose, it is still available to be used for another purpose. It is always growing in terms of improving on the knowledge and new information gained over the time. Many of other intellectual capital indicators such as innovation, research and development, information technology and creativity are similar to knowledge.

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Furthermore, the ability of the company to innovate, to identify new opportunities, to design new products and to understand and respond to the needs of customers all depend on the skills and attitudes of its staff. Successful innovation requires creativity, high-level skills and adaptability to change. Processes for advancing and sharing knowledge ensure that the firm remains at the leading edge, constantly creating new products and solutions. Satisfied customers remain with the company and bring in more customers through recommendation. With the positive image, the company could win new businesses; expand networks and other joint ventures that may assist the company to enter new markets with success. The company's ability to operate successfully on different sites around the world relies on staff able to adapt and relate to different cultures.

In today's new economic environment, a company's values of intangible assets are increasing gradually. Organisations create long term value through constant innovation, by increasing the value of its customer base through improved customer retention, by increasing the value of its human capital with constant skill built-up in its workforce, and by increasing the value of its organisational capital through improved business processes and organisational models, reflect the companies new business strategy and provides it with a competitive advantage. Therefore, IC is seen as a production factor and as an asset such as physical capital, energy and land that organisations have to mix in order to have