THE INFLUENCE OF INTELLECTUAL CAPITAL ON THE PERFORMANCE OF TELEKOM MALAYSIA

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UNIVERSITI TEKNOLOGI MALAYSIA
THE INFLUENCE OF INTELLECTUAL CAPITAL ON THE PERFORMANCE OF TELEKOM MALAYSIA

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A dissertation submitted in partial fulfilment of the requirements for the award of the degree of Doctor of Engineering (Engineering Business Management)

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Dedication

To my beloved mother, father and wife for their prayers, patience, support and encouragement and to my seven children – ‘InsyaAllah’(with Allah’s help), if you believe enough, a man can do anything.
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ABSTRACT

This case study investigates the influence of intellectual capital on the performance of Telekom Malaysia. It consists of investigating the level of intellectual capital, the effect and influence of spiritual capital, the importance of knowledge management and managing and leveraging of intellectual capital on the performance. A mixed method research approach is used with strategies of inquiry that involve sequential quantitative and qualitative data collection. With broad intellectual capital theoretical perspective guides including the spiritual capital, the data collection is done sequentially in phases beginning with a questionnaires survey, followed by secondary data analysis and finally the interview sessions. Independent variables are human capital, structural capital, relational capital, spiritual capital, knowledge management and managing and leveraging of intellectual capital and dependent variable is performance improvement in the aspect of organisational and business leadership, operating efficiency and business performances. The survey involves the executives to assistant general manager levels working at various departments at the 14 states business areas and headquarters level and the interviewees are from the general manager to senior vice-president and CEO. Statistical techniques such as means of variance, factor analysis, ANOVA test, regression analysis, path analysis and narrative passages are used in analysing the data. The study indicates a positive significant relationship between relational, human, spiritual and structural capital and managing and leveraging of intellectual capital on the performance whereas knowledge management has indirect relationship to the performance. This research makes important theoretical and empirical contributions to the literature on the influence of intellectual capital, on the effect and influence of spiritual capital and the importance of managing and leveraging of intellectual capital on the performance of the organisation. By having a stronger spiritual capital within the higher management to manage and leverage the present intellectual capital, Telekom Malaysia will achieve further performance improvement in the future.
ABSTRAK

Kajian kes ini melibatkan pemeriksaan terhadap pengaruh modal intelek ke atas prestasi Telekom Malaysia. Ianya meliputi pemeriksaan terhadap tahap modal intelek, kesan dan pengaruh modal kerohanian, kepentingan pengurusan ilmu dan pengurusan serta daya pencungkilan modal intelek terhadap prestasi. Pendekatan kaedah bercampur digunakan dalam kajian ini dengan strategi penyiasatan melibatkan pengumpulan maklumat secara kuantitatif yang kemudiannya dituruti pula dengan secara kualitatif. Dengan berpandukan kepada teori modal intelek termasuk modal kerohanian, fasa pengumpulan data bermula dengan penggunaan borang kajiselidik dituruti dengan maklumat sekunder dalam syarikat dan diakhiri dengan sesi temubual. Pembolehuhubah tidak bersandar terdiri dari modal insan, modal kestrukturan, modal perhubungan, modal kerohanian, pengurusan ilmu dan pengurusan serta daya pencungkilan modal intelek, manakala pembolehuhubah bersandar ialah peningkatan prestasi yang terdiri dari kepimpinan perniagaan dan organisasi juga kecekapan operasi serta prestasi perniagaan. Borang kajiselidik melibatkan anggota diperingkat eksekutif sehingga peringkat penolong pengurus besar dari 14 pejabat perniagaan negeri dan diperingkat ibupejabat, manakala sesi temubual melibatkan anggota di peringkat pengurus besar, naib presiden kanan serta ketua pegawai eksekutif Telekom Malaysia. Teknik statistik seperti Analisa Min, Analisa Perbandingan Min, Analisis Faktor, Analisis Varian, Analisis Regresi, Analisis Lorongan serta analisis perjalanan penceritaan di gunakan didalam proses analisa maklumat. Kajian menunjukkan hubungan positif yang signifikan antara modal perhubungan, kerohanian, insan dan modal kestrukturan juga pengurusan dan daya pencungkilan modal intelek terhadap prestasi, manakala pengurusan ilmu mempunyai hubungan yang tidak langsung dengan prestasi. Kajian ini telah memberikan sumbangan teori dan empirikal terhadap keilmuan disegi pengaruh modal intelek, kesan dan pengaruh modal kerohanian dan kepentingan pengurusan serta daya pencungkilan modal intelek terhadap prestasi organisasi. Dengan mempunyai modal kerohanian yang lebih kuat dikalangan pengurusan atasan untuk mengurus serta daya mencungkil modal intelek yang sedia ada, Telekom Malaysia akan dapat mencapai tahap peningkatan prestasi yang lebih baik dimasa depan.
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LIST OF SYMBOLS/ABBREVIATIONS/NOTATION/TERMINOLOGY

AGM - Assistant General Manager
CEO - Chief Executive Officer
C&B - Consumer Business Sales
CKO - Chief Knowledge Officer
CMO - Change Management Office
CNO - Customer Network Operation
CTS - Corporate Strategy
Dev. - Development
ELDP - Executive and Leadership Development Program
GM - General Manager
HC - Human Capital
HQ - Headquarters
HR - Human Resource
HRD - Human Resource Development
HRM - Human Resource Management
HSC - Higher School Certificate
IC - Intellectual Capital
ISI 2020 - Generic standards based on universal ethic, moral Values and on the tenets of Islam
KM - Knowledge Management
KPI - Key Performance Indicator
MAPS - Managing and Assessing Performance System
MBS - Major Business Sales
MLIC - Managing and Leveraging of Intellectual Capital
MSC - Multimedia Super Corridor
MTI - Malaysian Telecommunication Instructions
MCE - Malaysian Certificate of Education
MCM - Management Committee Meeting
MLDP - Management Leadership Development Program
MPP - Manual Prosedur Perniagaan
NITA - The National Information Technology Agenda
NWO - Network Operation
NWD - Network Development
OEBP - Operating Efficiency and Business Performance
OBL - Organisational Leadership and Business Performance
P - Performance
PGS - State of Penang
Potentia M - Potential for Manager
QIBE - Quality Improvement and Business Excellence
RC - Relational Capital
SC - Structural Capital
SD - Standard Deviation
SGM - Senior General Manager
SMAC - Senior Management Assessment Centre
SMDP - Senior Management Development Program
SNO - State Network Operation
SPM - Sijil Tinggi Pelajaran
SpC - Spiritual Capital
STP - Sijil Tinggi Persekolahan
SVP - Senior Vice-President
TM - Telekom Malaysia
TMBEA - Telekom Malaysia Business Excellence Assessment
TSY - Telco Strategy
TTC - Telecom Training College
VP - Vice-President
VSS - Voluntary Separating Scheme.
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CHAPTER 1

INTRODUCTION

1.1 Background

The telecommunication industry has entered a very competitive environment for the past few decades and the industry has been deregulated. The Malaysian government has established a vision to be a developed nation by year 2020 and the deregulation of telecommunication services is one of the most important steps towards achieving that vision. The era when the Government, first through it’s Jabatan Telekom Malaysia, and then through Telekom Malaysia Berhad, held the monopoly over the telecommunication services effectively ended by 1992. Presently, there are four telecommunication services operators to serve the 25.58 million Malaysian populations as at December 2004 (Department of Statistic, Malaysia, 2004). At that same time, there were 4.60 million fixed telephone services, 11.43 million mobile services and 2.89 million dial-up internet customers (Malaysian Communication & Multimedia Commission, 2004).

To achieve the aspiration and realise the vision of making Malaysia a developed nation, and to survive in this highly competitive and challenging business environment, Telekom Malaysia has to be competitive, dynamic and robust. With the advancement made in the telecommunication technology, with the formation of various forms of business coalitions between local telecommunication services operators and other world-class telecommunication companies, the challenge for the business survival of Telekom Malaysia is inevitable. Thus Telekom Malaysia that holds 97% of the market share of the fixed telecommunication services, 39% of the mobile services and 54% of the internet customers in Malaysia customers (Malaysian Communication & Multimedia Commission, 2004) has to maximize the utilisation of Telekom Malaysia’s
resources, especially its intellectual capital. Intellectual capital is defined as an identifiable non-monetary asset without physical existence held for use in the production or supply of products or services, for rental to others or for administrative purposes (IAS 38, 1998). As an established leader of the nation’s telecommunication services industry, Telekom Malaysia’s intellectual capital has grown, because it has been developed and nurtured for the past few decades.

In his keynotes address during Global Knowledge II Conference 2000, Dr. Mahathir Mohamad (2000), former Prime Minister of Malaysia says:

“Vision 2020 emphasizes that in the information age which we have entered – our society must be information rich. There was a time when land was the most fundamental basis for prosperity and wealth, then came the second wave, the age of industrialisation. Now, increasingly knowledge will not only be the basis of power but also prosperity…Through the shift to k-economy, where the knowledge content and the knowledge contribution will see a quantum leap in every area, the Malaysian economy and Malaysia’s society will not be quite the same again”

Malaysia’s development vision, as outlined in Vision 2020, is to become a fully developed nation with a “values-based society”. The National IT Agenda (NITA) interprets this, as the roles of information, knowledge and techno-preneurship are important to leapfrog the developmental stage from industrial economy to the K-economy. NITA’s mission is “…knowledge must be translated into value and wealth-creation for the property of Malaysians” (Wan Mohamad, 1999). President and CEO of MIMOS Berhad Malaysia says:

“Malaysia needs to leverage on knowledge economy, where intellectual capital becomes a primary factor of growth. Because of this, the high density of the repositories of this intellectual capital, knowledge workers become vital to every country’s success” (Shariffadeen, 2000).

Blair (2000) of Brooking Institute suggests that tangible assets have continued to tumble in value:

“If you just look at the physical assets of the companies, the things that you can measure with ordinary accounting techniques, these things now account for less than one fourth of the value of the corporate sectors.
Another way of putting this is that something like 75 percent of the sources of value inside corporations is not being measured or reported on their books”.

In yet another demonstration of the importance of intangible assets, the Sloan School of Management at MIT and the consulting firm Arthur Anderson recently announced the joint formation of the New Economy Value Research Lab – the think tank study – and develops quantitative valuations of the intangible assets Wall Streets finds increasingly important in the new economy. Lab co-chair, Boulton (2000) says:

“Even the Coca-Colas and Disney’s of the world are actually creating most of their value from assets that don’t appear on their Balance Sheets”.

The new knowledge economy places a high premium on human capital. Davenport (1999) cogently describes this new paradigm as, “People possess innate abilities, behaviours, personal energy and time. These elements make up human capital— the currency people bring to invest in their jobs. Workers not organizations own this human capital…and decide when, how and where they will contribute it.”

As a former government department, Telekom Malaysia has inherited the 28,000 employees, all the systems, technologies, business network and customers of Jabatan Telekom Malaysia. In 1996, the value of the human capital in Telekom Malaysia which in this case refers to only the salaries and allowances to the employees, stood at RM 836 million and in 2003, the value of its human capital was RM 1,412 million, an increase by 69% within seven years (Telekom Malaysia Annual Report, 1996, 2003). That is only in term of salaries and allowances, how about long-term relationship, know-how and others? This means that the only way for Telekom Malaysia to have an edge over its competitors will be to develop and put greater the use of its intellectual assets.

In this “new economy” or “knowledge economy” one principally driven by information and knowledge, the true value of Telekom Malaysia can only be achieved by developing its intellectual capital. This is the critical aspect of its present and future
value – no longer confined to the managing of network, systems and physical assets of Telekom Malaysia. Indeed, for the first time in business history, the workers, not the organization, owns the means of production, the knowledge and capabilities they possess and they decide how and where to apply it.

1.2 Research Problem

In 2001, the nation’s regulatory requirements have created five new-licensed telecommunication services operators. Accordingly, to remain competitive, Telekom Malaysia has reorganised itself into five major business groups to response to this new challenge. Also, under it’s “Change Program” Telekom Malaysia has spent a lot of effort, time, money and other related resources worth estimated at RM 10 million since 2001 to 2003 to provide the infrastructure and implementing projects and programs, such as employee training and development, customer relations management, quality improvement activities and culture transformation programs in order to achieve it’s vision (Telekom Malaysia, 2003). The vision is to become “The Communication Company of Choice”, which focuses on delivering exceptional value to its customers and other stakeholders.

In attempting to achieve Telekom Malaysia’s vision of being the communication company of choice, it faces these major-problems in the area of intellectual capital:

(i) The deteriorating trend of fixed network telecommunication services customers and market share of telecommunication services. Could this be due to the degree of availability and utilisation of intellectual capital?

(ii) The information on the effective management and leveraging of intellectual capital is either not available or not utilised for determining Telekom Malaysia’s strategic direction. It’s as if intellectual capital does not matter in the realisation of its business strategy.

(iii) The influence of intellectual capital to Telekom Malaysia’s performance, in the present as well as in the future competitive business environment and K-economy is not being addressed at all.
(iv) The effectiveness in implementing the “Change Program” and the results from the budget spent, times and effort for the program and other related activities are not known for further actions and improvements.

Hence this study aims to address the importance of intellectual capital on the performance of Telekom Malaysia and this study also intends to show that the dimension of spiritual capital is integral to the development of intellectual capital that will contribute to the outstanding performance of Telekom Malaysia as proven in many ‘world-class’ corporations.

1.3 Research Objectives

The purpose of this two-phase, sequential mixed methods case study will be to obtain statistical and quantitative results from a sample, secondary data and then follow up with few individuals to explore those results in more depth for following research objectives:

(i) So far, few empirical studies of intellectual capital conducted such as by Bontis (1998), Youndt (1998), Bontis et al. (2001), Shook (2002) and Hayton (2002), provide some general evidence that intellectual capital or a component of intellectual capital is positively associated with measures of various organizational performance. In this study further investigation is to be done on the influence of intellectual capital on the performance of Telekom Malaysia specifically on the organizational and business leadership, operating efficiency and business performances through the ‘case study’ of Telekom Malaysia.

(ii) It is also necessary to investigate the effect and influence of the newly defined 4th component of intellectual capital in this study – the ‘Spiritual Capital’ on the performance of an organization. This study is timely with the eagerness of all parties in Telekom Malaysia to know the results from the implementation of the ‘Change Management Program’ for the culture transformation of Telekom Malaysia, which started since year 2000.
(iii) To identify what is the level of intellectual capital availability and which component of the intellectual capital has a more profound effect or critical influence on the performance of Telekom Malaysia.

(iv) To investigate the importance of knowledge management, managing and leveraging of intellectual capital in Telekom Malaysia, to achieve business competitiveness, in the present and future business environment as well as to bring out relevant and significant performance improvement, in its critical business issues. The accurate information on the degree of effectiveness, in managing and leveraging of intellectual capital in Telekom Malaysia will form the major issues, for Telekom Malaysia to develop its strategy and future business direction.

(v) To propose to Telekom Malaysia, to accept, adopt and apply the recommendations proposed in this study, with the appropriate modifications and business performance problems, as well as use them in their future business planning processes to their current management.

In the first phase, quantitative research questions with respondents from Telekom Malaysia’s executives will address the relationship of intellectual capital, knowledge management, managing and leveraging of intellectual capital to Telekom Malaysia’s performance. In the second phase, the secondary data will be analysed for the relationships and corroboration amongst variables in the survey, and qualitative methods will be used to probe significant quantitative results by exploring aspects of the whole relationships and corroboration of the research subject with the participation from higher management of Telekom Malaysia. Finally triangulation through the multiple data provides comprehensive perspectives of the research subject.

1.4 Justification for Study

The justifications for this study are:

(i) Many of the past researchers in the field of intellectual capital have confined their efforts to only using mainly the quantitative research methodology. Very few have combined their studies with the case study approach, and very few still have used the mixed method methodology to
study this subject, to gain much deeper insights into the subject, to learn about the many idiosyncrasies within an organization that may hamper its prosper use, and the full benefits that an organization can benefit if it is used correctly.

(ii) Although Gillett (2002) and Zohar (2004) use the term ‘spiritual capital’ in their articles and books, their spiritual term is not within the intellectual capital framework discussed in all the available literatures. A study on the subject does exist, but it is not done empirically. A case study is not done on the subject and as yet, there is no theoretical framework being offered to explain its conceptual framework. The present studies, give a comprehensive meaning to the term ‘spiritual capital’ as the 4th component of intellectual capital.

(iii) The past studies mostly investigate the components of intellectual capital – human capital, structural capital and relational capital and their influence on performance. None of them has studied the importance of managing and leveraging the intellectual capital, only the components of intellectual capital themselves. The importance of managing and leveraging the intellectual capital becomes one of the major interests in this study. In general, this research offers significant contributions to the available literature on intellectual capital.

(iv) There has been no study done on the intellectual capital available in Telekom Malaysia before this, whether on the level of its presence or it’s utilisation in the company neither for further planning and actions nor to leverage it to achieve all-rounds benefits for Telekom Malaysia. As explained earlier, despite the efforts, time, and other resources Telekom Malaysia has spent on its ‘Change Management Program’, the results have not seen favourable. Since intellectual capital could be effectively managed and leverage, for the improvement of Telekom Malaysia’s performance, this study is important and timely for Telekom Malaysia to gauge the effectiveness of the implementation of the change management program. This cost includes the professional fees for the consultants, producing the numerous reports generated by them and the various internal departments, benchmarking exercises, and other study groups, which should finally result in significant improvement to the performance of Telekom Malaysia.
(v) As such this case study involves an investigation into the ‘what’, 'how’ and ‘why’ such phenomena occur in Telekom Malaysia, the outcomes then will provide the necessary required strategies and actions to strengthen it’s capital management, to enable it to compete and succeed in the current and future competitive knowledge economy. Furthermore, since intellectual capital management involves every employee in Telekom Malaysia, it would be beneficial to ascertain whether the overall objective of its ‘Change Management Program’ has affected every employee in Telekom Malaysia and whether the expected ‘change’ will be achieved, sustained and improved in the future.

1.5 Organization of Thesis

The whole thesis comprises five chapters. Chapter 1 introduces the research problem and objectives of the study. Chapter 2 presents the related literatures on intellectual capital management and knowledge management. Chapter 3 presents the development of a new model of intellectual capital by including the spiritual capital. Chapter 4 discusses the research design and methodology used in the study. It covers the theoretical framework and data collection processes. Chapter 5 talks about the analyses and discussion done on the data collected from the survey conducted, other secondary sources referred to and from the interviews conducted. The result – in the forms of descriptive statistic, as well as, the explanations on the relationships amongst the variables identified in the theoretical framework – is presented. Finally, Chapter 6 concludes the thesis by discussing the benefits of this study to Telekom Malaysia, followed by conclusion of this study, its limitations and some suggestions for further research to follow and finally the recommendations to Telekom Malaysia, as to what it can gain from these findings, to enhance its competitiveness.
1.6 Key Definitions and Concepts:

“Intellectual capital”(IC) is defined as an identifiable non-monitory asset without physical existence held for use in the production or supply of products or services, for rental to other administrative purposes. There are four components of intellectual capital:

(i) “Human capital” (HC) is the ‘tangible’ tacit knowledge embedded in the minds of individuals which include employee competence, know how, education, innovativeness, capabilities, work related knowledge and changeability.

(ii) “Structural capital” (SC) is the organizational capabilities and routines in performing business which include organizational structures, operating manual and procedures, databases, documents, information system, networking system, research and development capabilities, patents, copyright and trade marks, system and technologies.

(iii) “Relational capital” (RC) is the relationship between the organization and the outside environment, which includes alliances, and relationship with customers, partners, suppliers, investors, franchiser, distribution networks, government bodies and agencies, image and brand, communities, public and environment.

(iv) “Spiritual capital” (SpC) is the “intangible knowledge”, faith, belief and emotion embedded in the minds and hearts of individuals and in the heart of organization, which includes vision and direction, principles, values and culture. The individual and organization behave and act with honor, integrity, sincerity, honesty, truth, trust, love, moral and ethic. It also includes motivation, self-esteem, courage, strength, commitment, teamwork, determination, desire, enthusiasm and team spirit. It focuses on interrelationships, interconnectedness and interdependency for sustainable development with the view to achieve final prosperity and happiness for all. It governs how the other three capitals should be used.
Summary

Telekom Malaysia has inherited many systems, technologies, types of business network, customers and 28,000 employee of Jabatan Telekom since 1996. As at 31st December 2004 Telekom Malaysia had 20,000 employees, 4.6 million of fixed network customers supported by various systems and technologies. In order to be competitive in the present business and in the ‘knowledge economy’, the only way for Telekom Malaysia to do so, is to have an edge over its competitors by developing and leveraging its intellectual capital. Intellectual capital consist of – human capital, relational capital, structural capital and the newly proposed component, spiritual capital.

This study aims to address the importance of intellectual capital on the performance of Telekom Malaysia and intends to show that the dimension of spiritual capital is integral to the development of intellectual capital that will contribute to the outstanding performance of Telekom Malaysia. This has been proven in many world-class organizations. This study also will identify what is the level of intellectual capital availability and which component has a more profound effect on the performance of Telekom Malaysia, the importance of knowledge management and managing and leveraging of intellectual capital on the Telekom Malaysia’s performance.
References


Brooking A (1996). *Intellectual Capital, Core Asset for the Third Millennium*


Choo A. S. C. (2003). *Knowledge Creation Using a Structured Improvement Approach: Toward an Integration of Quality and Knowledge*. University of
Minnesota: PhD. Thesis.


John Wiley & Sons Ltd,


National Institute of Public Administration Malaysia.


Konz G.N.P. and Ryan F.X. (1999). Maintaining an organisational spirituality:


Hamilton: McMaster World Congress.


Hamilton: McMaster World Congress.


Supplements at Skandia. Accounting, Auditing & Accountability Journal.
Vol.14, No.4: 399-422.


