The Influence of Human Capital on Company Performance: A Preliminary Study of Telekom Malaysia

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1.0 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. 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 it's intellectual capital.

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 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 paper 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. The whole of this paper comprises of five parts. Part 1 introduces the background of this paper. Part 2 presents the related literature on intellectual capital and knowledge management. Part 3 presents the methodology used in the study. Part 4 discusses the finding and results of the study and finally, Part 5 provides conclusion of this study.

2. Survey of Related Literature

The works of Sveiby (Sveiby, 1989), Brooking (Brooking, 1996), Edvinson (Edvinson and Malone, 1997), Stewart (1997), Saint-Onge (Saint-Onge, 1997), Lev (Lev, 1997) Sullivan (1998), Johan and Roos (Roos *et al.,* 1998) have influenced the thinking about the non-tangible factors, the 'weightless wealth' that determine the success of a company (Andriessen, 2001). Generally intellectual capital is considered to be the stored knowledge possessed by an organization, which may be tacit knowledge, personal knowledge possessed by an employee and may be explicit knowledge, codified and stored by the organization and available to individuals throughout the structure (Nonaka & Takeuchi, 1995). Various convincing justifications have been forwarded for the need of measuring, reporting and managing intellectual capital (Brooking, 1996; Petty and Guthrie, 2000; Sveiby, 1998; Edvinson, 1997; Edvinson and Malone,

1997; Mouritsen, 1998; Allee, 2000; Marr *et al.*, 2003) and various research projects have been made to explore other related details of this subject such as 'Measuring and reporting intangibles to understand and improve innovation management' (Meritum) then E*KNOW-NET (Petty and Guthrie, 2000), which are supported by the European Commission. The importance of intellectual capital is emphasised in the revolution in information technology and the information society, the rising importance of knowledge and the knowledge-based economy, the changing patterns of interpersonal activities and the network society and the emergence of innovation as the principle determinant of competitiveness (Petty and Guthrie, 2001). All the above efforts, researches and developments, show the importance of intellectual capital as a major instrument in the determination of enterprise values and national economic performance (Mouritsen, 1998).

2.1 Intellectual Capital and Business Performance

Measuring performance is something that all organization do (Parker, 2000). B.W. Associates (1994) defines performance as the manner or quality of functioning, which implies that management of performance is concerned with the manner or quality of managing and Kaydos (1991) defines performance as how well something does what it is supposed to do. In principle, two basic objectives of performance are – accountability and improvement (Foster, 2001).

Performance measurement is essential for achieving and maintaining high levels of productivity and quality (Sinclair & Zairi,1995), its provides the link between strategies and actions (Dixon *et al*, 1990), for good management control and planning, and for developing and motivating an organization (Nanni *et al.*,1990, Roberts,1994). It can encourage transparency, integration of processes, internal communication, a culture of improvement (Foster, 2001) and motivate managers to act in a way that is consistent with the organization's plan. The underlying theory is that, what gets measured get done (Roberts, 1994). Through performance measurement, organization can have the answer to – what was happened, why has it happened, is it going to continue and what we are going to do about it? (Nooreha, 2002).

Performance measurement involves the systematic gathering, analysis and reporting of information to management (Mokhtar, 2002) and it is the process of quantifying past actions (Neely, 1998).A good performance measurement system must link operations to strategic objectives, integrate financial and non-financial information and must be customer focussed (Mokhtar, 2002). Some of the performance dimensions are competitiveness, financial, quality of service, flexibility, resource utilisation and innovation (Nooreha, 2002).

Generally organizations measure performance due to various reasons such as – to identify success, to identify achievement, to understand the

processes, to identify where problems are and the necessary improvements needed, to confirm improvements, to ensure decisions made are based on facts not on emotion or intuition (Parker, 2000).
Intellectual capital has been identified as a key resource and driver of organizational performance and value creation (Itami, 1991; Teece, 1998; Mayo, 2000). Narver and Slater find that market orientation, relational capital and business performance (ROA) are strongly related (Narver and Slater, 1990) and Jaworski and Kohli (1993) find that market orientation is an important determinant of performance on his study of 222 US business units. Intellectual capital, which is considered the most important intangible asset in the company, significantly affects the valuable change and success of the organization through understanding, developing and managing the company's intangible assets (Nonaka & Takeuchi, 1995).

Youndt (1998) empirically shows the following relationships between intellectual capital and performance:

(i) Human capital is positively related to sales growth but is not significantly related to financial returns.
(ii) Relational capital is negatively related to sales growth and shows no significant relationship with financial returns.
(iii) Structural capital is not significantly related to sales growth but is positively related to financial returns.
(iv) Human capital is not significantly related to reduced organizational costs but it significantly relates to increased customer benefits.
(v) Relational capital shows no significant relationship to increase benefits but is significantly related to reduced organizational costs.
(vi) Structural capital is not significantly related to reduced organizational costs, but is positively related to increased customer benefits.

Using a survey data, Bontis (1998) shows the following relationships between Likert-type measures of intellectual capital and business performance:

(i) Human capital is significantly related to structural capital.
(ii) Human capital is significantly related to relational capital.
(iii) Structural capital is significantly related to business performance.
(iv) Relational capital is significantly related to business performance.

Again using a survey data, Bontis *et al.* (2000) show the following relationships between Likert-type measures of intellectual capital and business performance for Malaysian industries:

(i) Human capital is significantly related to relational capital for service industries and non-service industries.
(ii) Human capital is significantly related to structural capital for non-service industries.

(iii) Human capital is not significantly related to structural capital for service industries.
(iv) Relational capital is significantly related to structural capital for service industries and non-service industries.
(v) Structural capital is significantly related to business performance for service industries and non-service industries.

Walker (2001) empirically shows the following relationships between human capital and performance measurement:

(i) The value of human capital is significantly related to the firm's performance measurement of human capital market value in the low knowledge-base industry.
(ii) The value of human capital is significantly related to the firm's performance measurement of human capital market value in the high knowledge-based industry.
(iii) The value of human capital is not significantly related to the performance measurement of productivity, profitability or market evaluation in either low knowledge-based industry or high knowledge-based industry.

Shook (2002) shows the following relationships amongst intellectual capital, the analyst and investment broker attitudes:

(i) Intellectual capital value is a factor of investment decision with at least an equivalent importance to traditional financial and physical asset values.
(ii) Intellectual capital value is at least a perceptual value to the analyst or investment broker making value determinations for company growth, development or valuation

Shell International verifies the impact of intangible assets such as employee satisfaction, organizational culture, environmental and social responsibility on their corporate strategy and financial performance (Marr *et al.* 2002, 2003).

Beside intellectual capital, knowledge which has a strong relationship with intellectual capital also forms the foundation of company business performance (Marr *et al.*, 2002), it is a strategic resource for the company to develop its sustainable competitive capability (Davenport & Prusak, 1998) and knowledge stocks, flows and creation are closely related to business performance (Grant, 1996; Bontis, 1999). However the most knowledgeable firms are not always the most profitable. Knowledge only leads to superior performance if the industry characteristics enable the knowledgeable company to appropriate the profits from the new ideas (Bierly and Daly, 2002).

The survival and performance sustainability of an organization in the long run will be determined by how the right capital mix between physical and intellectual capital of the organization is leveraged to satisfy the interest of its stakeholders – shareholders, creditors, suppliers, customers, communities, employees including the whole human race, present and future and the planet itself. Intellectual capital which includes of human capital, structural capital and relational capital will play a central role in fuelling the success of companies in this century (Zohar, 2004).

2.2 Knowledge Management and Intellectual Capital.

Knowledge is the meaningfully structured accumulation of information which may be categorized as explicit or tacit (Hubert & Stuart, 1984). Explicit knowledge can be formally articulated, more easily transferred or shared but is abstract and removed from direct experience. Tacit knowledge is developed from direct experience and action often referred to as knowledge-in-practice. It is highly pragmatic, situation-specific, subconsciously understood and applied, difficult to articulate and usually shared through highly interactive conversation, story-telling and shared experience (Zack,1993). Knowledge must be internalized and made tacit to be truly understood and applied to practice, it is best exchanged, distributed, or combined among communities of practice by being made explicit. Once shared, explicit knowledge can be internalized and made tacit again by reapplying it to practice. This constant cycle of tacit creation leading to explicit combination and exchange enlarges the total knowledge base of the organization (Nonaka,1995)

In Islam, the importance of knowledge can be understood through the conversation between Ali, the fourth caliph of Islam after the Holy Prophet (peace be upon him) with the Khawarij tribe (Salam, 1981). The holy prophet says, "I am like a city of knowledge and Ali is the gateway to that city." The Khawarij tribe chooses ten of their most educated and taught men, to test the truth of the prophet's statement, by asking Ali, "which is more important and valued, knowledge or property?"

Ali answers,

(i) "Knowledge takes care of you, while you have to take care of properties.
(ii) Knowledge, because with a lot of properties you tend to have a lot of enemies, but with a lot of knowledge you tend to have a lot of friends.
(iii) When you give a
way your properties, they become less, while the more you give away your knowledge the more it grows.
(iv) Those with a lot of properties are called 'stingy', while those who are knowledgeable are considered learned are called by honorable and respectable names.

(v) Those with properties are assessed in the Day of Judgment, while those with knowledge are duly rewarded on that they.
(vi) There are a lot of thieves after your properties, there is none after your knowledge.
(vii) Knowledge is the properties of all prophets, because knowledge causes those who possess it to have hearts that are soft and crystal clear, while those with properties have hearts that are hard.
(viii) Properties grow less with time, while knowledge will not become less although it may not increase."(Salam, 1981).

In another occasion with a man named Kumail, Caliph Ali Abdul Mutalib the fourth caliph of Islam, said:

" Oh Kumail,
Knowledge is better than material wealth. Knowledge takes care of you, whereas you have to take care of material wealth. Knowledge is the judge, whereas material wealth has to be judged. Material wealth becomes less, when you spent it; knowledge on the other hand grows when you spent it."
Caliph Ali adds that, "a person who is knowledgeable and practices what he knows is far better than those who fast, practice qiyamullail (i.e. performs night prayers) and performs the "jihad". When a knowledgeable Muslim dies, Islam will be that much poorer and adversely affected, which cannot be put right by any other person" (Al-Ghazali, 1975).

Intellectual capital and knowledge have a very strong relationship. The definitions of intellectual capital by many authors clearly include the element of "knowledge" such as – intellectual capital is, intellectual material-knowledge, information, experience, intellectual property that can be put to create wealth (Stewart, 1999; Chatzkel, 2002), the 'stock' of knowledge that exists in an organization at a particular point of time (Bontis *et al.*, 2001). At the same time the critical role of "knowledge" in intellectual capital is highlighted by other authors such as – an organization increases its intellectual capital by creating, sharing and leveraging knowledge (Allee, 2003) and managing and integrating knowledge to develop intellectual capital (MacDougal & Hust, 2002). Intellectual capital can be seen as the framework for intangible resources in an organization as well as a way to understand the stock of those resources. Knowledge management leverages intellectual capital through an integrated approach to create, share, and apply knowledge for desired outcomes and both intellectual capital and knowledge management are two branches of the same tree (Chatzkel, 2002).

Stewart (2001) identifies three pillars for knowledge economy to stand. The first is that knowledge has become what we buy, sell and do. The second pillar is a mate, a corollary to the first: knowledge assets – that is, intellectual capital – have become more important to companies than

financial and physical assets. The third pillar is the need of new vocabularies, new management techniques, new technologies and new strategies to exploit these newly vital assets.

Knowledge is a resource of value creation with a major attribute of appreciating value with continuing use and sharing of knowledge instead of depreciating value of tangible resources (Arthur, 1996). Sveiby (2001) identifies nine basic knowledge transfers in organization which create value for the organization:

(i) between individuals.
(ii) from individuals to relational capital.
(iii) from relational capital to individuals.
(iv) from individual competence into structural capital.
(v) from structural capital to individual competence.
(vi) within the relational capital.
(vii) from relational capital to structural capital.
(viii) from structural capital to relational capital
(ix) within structural capital.

The nine knowledge transfers exist in most organization but they tend not to be coordinated in a coherent strategy due lack of accurate understanding of what a knowledge-based theory may give them and most organizations also have the legacy and cultures that block the leverage (Sveiby, 2001). The successful of knowledge transfer processes need to be supported by the whole management system of the organization including the information system, career development, reward and recognition and performance management system.

Knowledge management involves gathering, structuring, storing, and accessing information to build knowledge. It also involves creating a culture that encourages and facilitates the creation and sharing of knowledge within an organization (Boyett & Boyett, 2001). Organizations which manage knowledge effectively exhibit the following characteristics (Zack, 1993):

(i) Applying maximum effort and commitment to creating, sharing and applying their knowledge.
(ii) Applying an appropriate level and mix of skill, knowledge and expertise to problems and opportunities.
(iii) Employing an organizational and technical knowledge processing strategy appropriate to the situation.
(iv) Engaging in effective communication as evident by the reliable, accurate, timely and meaningful exchange of information and knowledge.

In this theoretical study, the relationship between intellectual capital and knowledge is best described in the metaphor of the tree as discussed

before. In the above metaphor, the tree is the intellectual capital, the knowledge is the environment – the dews, and rains from the sky, the light from the sun, the nutrients and minerals from earth, and the fruits and emission of oxygen as the wealth created. Intellectual capital can only be developed and it grows to produce the desired wealth in an organization through the availability of healthy and the appropriate use of knowledge, which is flowing and used throughout the organization. The life cycle of the tree follows a set of inscrutable laws and principles in its close relationships with earth, rain, sun, other trees, other living things as well as within its internal system, amongst its roots, trunks, branches, leaves and fruits. This metaphor will be used as a foundation in developing the holistic theory of intellectual capital with the inclusion of spiritual capital as one of the important components of intellectual capital and the importance of knowledge in relation to the intellectual capital that will be leveraged together to improve the overall performance of the organization.

3.0 Research design and methodology

This part explains the design and methodology of this study. It covers the research framework, data collection, sampling and the instrumentation used. Since this research is an exploratory research, no hypothesis has been developed to be empirically tested

3.1 Research Framework.

Creswell (2003) proposes a research framework in designing the research proposal as shown in Figure 4.1 below:

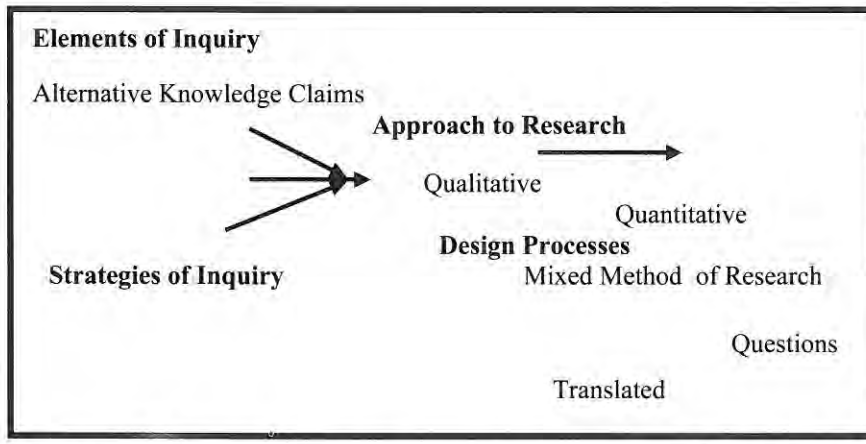

Figure 1: Knowledge claims, strategies of inquiry, and methods leading to approaches and the design process

Creswell's (2003) model, addresses three questions central to the design of research:

(i) What knowledge claims the researcher is making?
(ii) What strategies of inquiry will inform the procedures?
(iii) What methods of data collection and analysis will be used?

Stating knowledge claims means that researchers start a project with certain assumptions about how they will learn and what they will learn during their inquiry. Creswell (2003) discusses four knowledge claims - post positivism, constructivism, advocacy/participatory and pragmatism. Strategies of inquiry provide specific direction for procedures in research design such as quantitative, qualitative and mixed methods strategy. It is useful to consider the full range of possibilities for data collection and their degree of predetermined nature and their focus for numeric versus non-numeric data analysis (Creswell, 2003)

This research is a case study of Telekom Malaysia. Case study research is a research strategy (Eisenhardt, 1989; Denscombe, 1998) which is an in-depth study which focuses on the particular instances with a "holistic' view of the relationships and processes of the case with multiple sources of data such as archives, interviews, questionnaires and observations (Eisenhardt, 1989; Merriam, 1997; Denscombe, 1998; Creswell, 2003). This research method is chosen because researchers interested in insight, discovery and interpretation rather than hypothesis testing (Merriam, 1997) and this approach has considerable ability to generate answers to the question 'why?' as well as 'what?' and 'how?'(Robson, 1992).

Case study research can involve qualitative data only, quantitative only or both (Yin, 1994) but the combination of data types or the "triangulation" through multiple data, provides a comprehensive perspective of the matters, enhances the reliability and validity of the data, improves the quality of the research and provides a stronger substantiation of constructs and hypothesis (Eisenhardt, 1989; Denscombe, 1998; Taylor & Bogdan, 1998; Hussey & Hussey, 1997; Merriam, 1997). Various aims can be accomplished through case study such as to provide description, test theory or generate theory (Eisenhardt, 1989).The aim of this case study research is to arrive at a more comprehensive understanding through investigation of the insight and discovery of the subject under study.

In this research, a mixed method research approach is used with a pragmatic knowledge claim (e.g., consequence-oriented, problem-centred and pluralistic) (Cresswell, 2003) with strategies of inquiry that involve sequential quantitative and qualitative data collection - questionnaires survey, document analysis and interviews. With broad theoretical perspective guides, data collection is done sequentially in phases, beginning with a questionnaires survey to collect the generalised results of the population, followed by secondary data or document analyses to identify the relationship and corroboration between them and finally the interviews to conclude the overall "holistic" understanding (Mathinson, 1988; Denscombe, 1998) of the subject under study.

As quoted by Merriam (1998), rarely, however are all three methods of data collection used equally. One or two methods of data collection predominate – the other(s) play a supporting role in gaining an in-depth

understanding of the case. In this study, questionnaire survey predominate the method of data collection.

3.2 Research Model

Theoretical research model for this research is shown below in Figure 4.2. The whole study was based on this theoretical model:

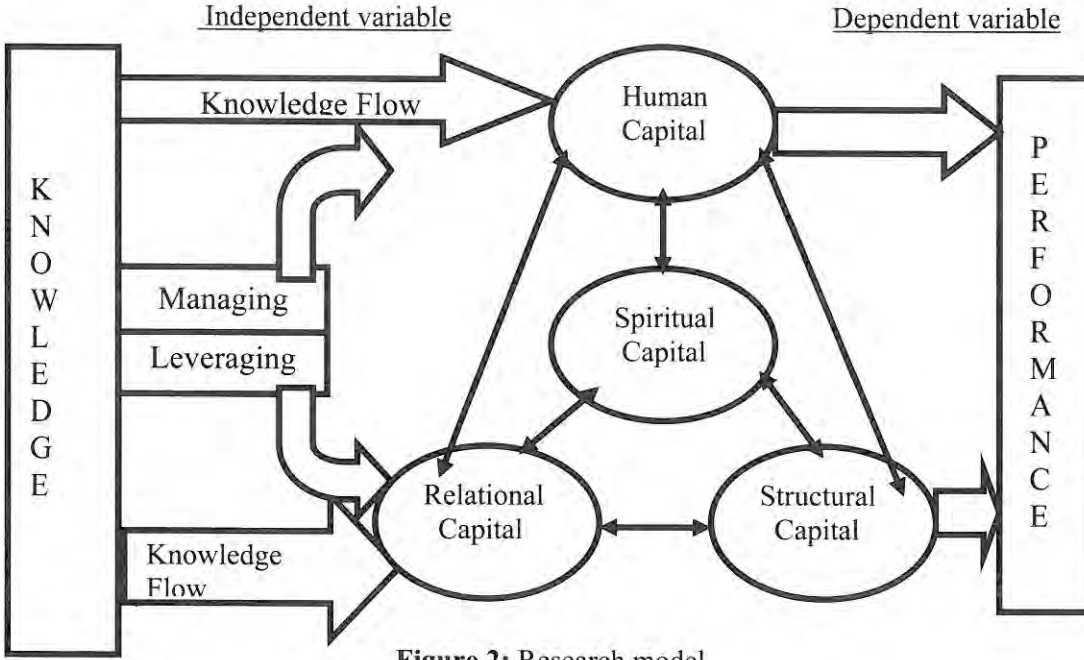

Figure 2: Research model

The aim of this study is to investigate the influence of intellectual capital on the performance of Telekom Malaysia and to provide a new definition of intellectual capital that includes spiritual capital into the existing model. This study also wants to establish whether this new inclusion-the spiritual capital, can indeed leverage the use and application of the other original capital – human capital, structural capital and relational capital. It is also necessary to identify the present level of intellectual capital and which component of intellectual capital has a more critical influence on the performance. Apart from attempting to arrive at a more comprehensive understanding of the subject, this study also wants to find out the importance of knowledge management and the importance of managing and leveraging of intellectual capital to achieve Telekom Malaysia's business competitiveness.

Through literature review this study has identified six important independent variables that contribute to the performance of Telekom Malaysia. Independent variables are variables that (probably) cause, influence or affect outcomes (Creswell, 2003). The independent variables are; human capital, structural capital, relational capital, spiritual capital,

knowledge management and managing and leveraging of intellectual capital. The dependent variables are variables that depend on the independent variables; they are the outcomes or result of the influence of the independent variables (Creswell, 2003). In this research, the dependent variable is the performance improvement of Telekom Malaysia which includes the organizational leadership, business leadership, operational efficiency and business performances.

All of the independent variables and dependent variables - human capital, relational capital, structural capital, knowledge and performance improvement were identified and derived from studies by past researchers like Youndt (1998), Bontis (1999), Walker (2001), Hayton (2002) and Shook (2003). Spiritual capital is the new component of intellectual capital, and managing and leveraging of intellectual capital is the independent variable proposed by this study.

As shown in the research model, there are six independent variables. The first four independent variables refer to assets that individuals and organizations actually do have:

(i) Human capital
(ii) Structural capital
(iii) Relational capital
(iv) Spiritual capital – the new proposal that together form the intellectual capital.

The other independent variables refer to what do individuals and organizations do with those assets – what is done with the accumulated knowledge they have and the extent to which the first four independents are managed and leveraged.

The first variable is human capital. Human capital examines the extent of knowledge of an individual, which includes competence, know how, education, innovativeness, capabilities and abilities to the overall performance of Telekom Malaysia. Human capital has a positive influence on organization performance (Youndt, 1998; Bontis, 1998; Bontis *et al.*, 2000; Walker, 2001)

The second independent variable is structural capital. Structural capital is the sum of organizational capabilities and routines in performing business activities, which include organizational structure, operating manual and procedures, databases, documents, information and networking system. Research & development capabilities, patents, copyright and trademark are not studied in this research because of Telekom Malaysia's nature of business as a service industry. Structural capital has a positive influence to organization performance (Bontis, 1998; Bontis *et al.*, 2000)

The third independent variable is relational capital. Relational capital determines the extent of the relationship between Telekom Malaysia and the outside environment which includes alliances, customers, partners, suppliers, investors, distribution networks, government bodies and agencies, image and brand, communities and the public to the overall performance of Telekom Malaysia. Relational capital has a positive influence on an organization's performance (Bontis, 1998; Bontis *et al.*, 2000). Market orientation – one of the manifestations of leveraging relational capital – has an important and positive relationship on business performance (Narver & Slater, 1990; Jaworski & Kohli, 1993)

The fourth independent variable is spiritual capital. Spiritual capital is an additional capital proposed by this study. Spiritual capital determines the extent of the most paramount and fundamental influence on intellectual capital, that is, the 'intangible' knowledge, faith, belief and emotion embedded in the minds and hearts of individuals within Telekom Malaysia to the overall performance of Telekom Malaysia. There are many successful companies such as Cisco, Continental Airlines, IBM, GEC, Microsoft, and Caterpillar that have shown from their experiences that the spiritual capital-as defined above such as vision, core values and corporate culture, has played a significant and important role to the sustainable and successful performance of their companies (Lucas,1999; Stauffer, 2000; Bethune,1998; Gestner, 2002; Thielen,1999; Despain, 2003)

The fifth independent variable is the knowledge management. Knowledge management determines the extent of knowledge identification, acquisition, application, sharing, development, creation and preservation of knowledge to the overall performance of Telekom Malaysia. Organizations with higher knowledge stocks relatively have higher business performance (Bontis, 1999).

The final independent variable is to determine the extent of leveraging and managing of intellectual capital to the overall performance of Telekom Malaysia. These aspects are important to ensure the intellectual capital that exists in the minds and hearts of the employees of Telekom Malaysia, is managed and leveraged, to achieve sustained and improved business performance.

The dependent variable is the perceived performance of Telekom Malaysia which covers the aspect of operating efficiencies, business performances, organizational leadership and business leadership. The perceived performance of Telekom Malaysia is based from the understanding of the respondents on Telekom Malaysia performance as stated in the Telekom Malaysia's 2002 annual report and any other official literature or documents on Telekom Malaysia which had been read by the respondents.

These performance indicators are relevant and important in measuring the stage of Telekom Malaysia performance as a telecommunication industry leader in Malaysia and to achieve the vision of Telekom Malaysia – to be the communications company of choice, focused on delivering exceptional value to customers and other stakeholders.

4 Findings and discussion

The demographic data of the respondent are as shown in Table 1a and Table 1b. The proportion of the male respondents (69.80 %) is higher than that of the female (30.20 %). The majority of the respondents are mature employees whose age is above 40 years (58.14 %), 33.72 % lies between 30 to 39 years old 8.14 % consists of young executives (between 20 to 29 years). The breakdown of races is 87.80 % Malay, 4.90 % Chinese and 4.10 % Indian. Most of them are degree holders who represent 75.90 % of which 7.60 % have a post graduate degrees - Master Degree. The executives whose job grade are 23 and below represent 58.15 %, those job grades falls between 24 and 25 represent 34.00 %, those falling to job grades 26 to 27 represent 7.85 %.

In term of working experience most of those who have had more than 15 years represent 52.31 %, those with between 6 to 15 years represent 38.66 % and those with less than 5 years, considered juniors in the company, represented only 9.03 %. The majority of the respondents are married - 91.60 %. The singles represent 6.40 %. The respondents represent all the state business areas with a higher percentage for critical business areas such as Selangor (8.44 %), Johor (8.14 %), Kuala Lumpur (7.85 %), Pulau Pinang (7.56 %) and Perak (7.85 %). Respondents from headquarters (11.34 %) represent the functional units in headquarters, such as Major Business Sales, Consumer Business Sales, Customer Network Operation, Training and Quality Improvement & Business Excellence and Procurement units. The respondents also representing all the critical units established in the state business areas especially Marketing (18.31 %), Customer Network Operation (14.83 %), Network Development (13.08 %) and Network Services (12.50 %). "Others Department" (14.24 %) represent respondents from Training, Quality Improvement & Business Excellence and Procurement units at the headquarters level.

Table 1a : Demographic data of the respondents

Demographic type	Description	Number	Percentage
Age	20 – 29	28	8.14
	30 – 39	116	33.72
	40 – 49	169	49.13
	50 and above	31	9.01
Race	Malay	302	87.80
	Chinese	17	4.90
	Indian	14	4.10
	Others	11	3.20
Gender	Male	240	69.80
	Female	104	30.20

Table 1b: Demographic data of the respondents (continue)

Demographic type	Description	Number	Percentage
Marital status	Married	315	91.60
	Single	22	6.40
	Divorced or separated	7	2.00
Qualification	MCE/SPM	7	2.00
	HSC/STP	10	2.90
	Certificate	0	0.00
	Diploma	66	19.20
	Bachelor's Degree	235	68.30
	Master's Degree	26	7.60
	PhD	0	0.00
	Others	0	0.00
Job Grade	Grade 23 and below	200	58.15
	Grade 23 – 25	117	34.00
	Grade 26 – 27	27	7.85
	Grade 28	0	0.00
	Grade 29 and above	0	0.00
	Non executives	0	0.00
Department	Marketing	63	18.31
	CNO	51	14.83
	Network Services	43	12.50
	Network Development	45	13.08
	Support Services	28	8.14
	Payphone	27	7.85
	Human Resource/Finance	38	11.05
	Others	49	14.24
Place of work	Kedah/Perlis	22	6.39
	Pulau Pinang	26	7.56
	Perak	27	7.85
	Selangor	29	8.44
	Kuala Lumpur	27	7.85
	MSC	18	5.23

	Pahang	19	5.52
	Trengganu	17	4.94
	Negeri Sembilan	20	5.81
	Melaka	21	6.11
	Johor	28	8.14
	Sabah	16	4.65
	Sarawak	19	5.52
	Headquarters	39	11.34
	Kelantan	16	4.65
	Others	0	0.00
Working tenure in Telekom Malaysia	Less than 2 years	8	2.33
	2 – 5 years	23	6.70
	6– 10 years	50	14.53
	11 – 15 years	83	24.13
	16 – 20 years	43	12.50
	Above 20 years	137	39.81

4.1 Descriptive Statistic of Variables

All the variables indicated in the Table 2.0 below are measured on a five-point Likert-type scale. From the results it can be seen that the mean for all except for spiritual capital (3.63) of the variables such as human capital (3.36), structural capital (3.38), relational capital (3.35), knowledge management (3.35), managing and leveraging of intellectual capital (3.32) and Telekom Malaysia's performance improvement (3.01), indicate that the general awareness and interest is on these issues has always been there. For various reasons, which this study will discuss later, this awareness and interest has not been encouraged to develop into a strong agreement, let alone commitment. It seems Telekom Malaysia has a strong interest towards a high level of spiritual capital.

Table 2 : Descriptive statistic: Central tendencies

Variables	N	Minimum Score	Maximum Score	Mean	Standard Deviation	Variance
Human Capital	344	1.88	4.50	3.3608	0.4687	0.2197
Structural Capital	344	1.25	4.63	3.3866	0.5477	0.3000
Relational Capital	344	1.63	4.63	3.3565	0.5086	0.2587
Spiritual Capital	344	2.07	4.80	3.6386	0.4525	0.2072
Knowledge Management	344	1.00	4.73	3.3550	0.5448	0.2964
Managing and leveraging of Intellectual Capital	344	2.20	4.60	3.3279	0.4075	0.1660
Performance improvement	344	1.40	4.67	3.0110	0.60992	0.37201

4.2 Survey Results and discussions.

The responses from 344 respondents are tabulated accordingly to each variable and the results as analyzed are as follows. The following tables present the results that show interests towards intellectual capital, knowledge management and Telekom Malaysia's performance improvement. The results are separated accordingly namely human capital (Table 3.0), structural capital (Table 4.0), relational capital (Table 5.0) and spiritual capital (Table 6.0). The other tables show knowledge management (Table 7.0), managing and leveraging of intellectual capital (Table 9. 0) and Telekom Malaysia's performance improvement (Table 10.0). The results present the means and the percentage of respondents answering the items under each variable. The variables are measured on a five point Likert-typed scale ranging from 1 = Strongly disagree to 5 = Strongly agree.

4.2.1 Human Capital

The results in Table 3.0 with an overall mean of 3.36 shows that the majority of the respondents seem to indicate that they are quite undecided when expressing their opinion in the presence of the level of human capital in Telekom Malaysia. The overall rating shows that the mean for 'employees cooperate, have trust and show respect when working in teams' is the highest (3.66) and the mean for 'employees can quickly adopt to changes made by TM's management without any difficulty' is the lowest (2.84). Evidence seems to suggest that employees have the expertise, capabilities and are cooperative in performing their jobs but they are less creative and innovative and find difficulty to quickly adopt changes made by the management. This may be due to the lack of supporting working environment for employees to share ideas and practice creativity provided by the management. It appears that the respondents are quite undecided when expressing their opinion in the competence of Telekom Malaysia's management team.

Table 3 : The mean and percentage of respondents on human capital

Total Mean = 3.36 **Median = 3.50** **SD = 0.468**	
Human Capital	
Survey Items	**Mean**
TM has a highly competent management team (MCM)	3.30
Employees can quickly adopt to changes made by TM's management without any difficulty	2.84
Employees are experts in their jobs	3.57
Employees are brilliant, innovative and creative	3.18
Employees are the most competent in the telecommunication industry	3.24
Employees cooperate, have trust and show respect when working in teams	3.66
Employees have the capabilities to operate the information system required for them the perform their jobs	3.54
Management provides conducive working environment for employees to share ideas and practice creativity	3.45

4.2.2 Structural Capital

The results in Table 4.0 with the overall mean of 3.38 show that the majority of the respondents seem to indicate that they are quite undecided when expressing their opinion in the availability of the level of structural capital in Telekom Malaysia. The overall rating shows that the mean for 'policies, procedures and work are contained in manuals and databases' is the highest (3.72) and 'information system is integrated with vendor's system' is the lowest (2.84). It appears that policies, procedures and knowledge are contained in the structure and system and the employees have accessibility to information system required for them to perform their task although the information system is not integrated with vendor's system. Evidence seems to suggest that the respondents are quite undecided in expressing their opinion in term of 'activities for process improvement and innovation of products, services and systems, synergy of information between division and the usage of advanced integrated management system in business operation'.

Table 4: The mean and percentage of respondents on structural capital

Total Mean = 3.38 Median = 3.37 SD = 0.547	
Structural Capital	
Survey Items	**Mean**
Policies, procedures and work instruction are contained in manuals and databases	3.72
Knowledge and are embedded in our structure, systems and procedures	3.57
Although key people left, vital knowledge and information has always remained with the organization	3.47
Employees have accessibility to information system required for them to perform their jobs	3.63
Information system is integrated with vendor's system	2.84
Use of extensive and advanced integrated management system in business operation to better serve customers	3.16
Division synergies strength and information with other divisions to deliver the best to customers	3.42
Process improvement and innovation of its products, services and systems are done actively to improve department's performance as well to reduce cost	3.28

4.2.3 Relational Capital

The results in Table 5.0 with the overall mean of 3.35 show that the majority of the respondents seem to indicate that they are quite undecided when expressing their opinion in the level of relational capital present in Telekom Malaysia. The overall rating shows that the mean for 'Telekom Malaysia's brand name is well-known in Malaysian telecommunication' is the highest (3.72) and 'Telekom Malaysia's distribution channel (e.g.: Kedai Telekom) has been performing excellently' is the lowest (2.84). Besides the Telekom Malaysia's brand name is well- known in Malaysian telecommunication and the business collaboration with other international telecommunication operators enhances Telekom Malaysia's competitive edge and performance, it appears that the respondents are quite undecided in the usage of feedback from vendors and customers to provide quality services to customers and the performance of Telekom Malaysia's distribution channel. They are expressing similar decision for the usage of customers' profiles to serve customers and the support of vendors and government agencies to Telekom Malaysia.

Table 5: The mean and percentage of respondents on relational capital

Total Mean = 3.35 Median = 3.37 SD = 0.508	
Relational Capital	
Survey Items	**Mean**
Vendors have performed extremely well in supporting department to achieve business targets	3.12
Use of customer feedbacks effectively in our effort to provide quality services to customers	3.49
Use of feedbacks and recommendations from vendors to produce better products and services to customers	3.26
Government agencies provide good support to us in our effort to serve the people better	3.18
TM's distribution channel (e.g.: Kedai Telekom) has been performing excellently to serve customers	3.01
TM's brand name is well- known in Malaysian telecommunication services	3.97
TM's business collaboration with other international telecommunication operators enhances TM's competitive edge and performance	3.55
Important customers can be serve excellently because we have a customers profile including their requirements and level of services expectation	3.30

4.2.4 Spiritual Capital

The results in Table 6.0 with the overall mean of 3.62 indicate that the majority of the respondents agree that Telekom Malaysia has a high level of spiritual capital. The overall rating shows that the mean for 'work at the best of capabilities because working is part of my acts of devotion to God' is the highest (4.34) and 'TM will reap future business advantages by providing services in a non profit making areas' is the lowest (3.10). Evidence seems to suggest that the employees have a moderately high level of spirituality, because they are sharing a common belief and believe that working is part of their acts of devotion to God which results in their thankfulness, commitment, loyalty, sincerity, honesty, and that they are ethical and truthful in performing their duties.

Although it seems that the respondents agree that Telekom Malaysia is following the principles and tenets of good corporate governance and will be more profitable and prosper by contributing financial and non-financial aids to religious and philanthropic activities, they are quite undecided when expressing their opinion as to whether Telekom Malaysia provides services in a non-profit making areas and whether considers the environment, health and social benefits when planning and implementation projects. Similarly, they seems quite undecided when expressing their opinion in their faith to the present Telekom Malaysia's management in performing their duties,

the practice of "Machiavellian's principle", the belief and internalized core values held by the employees, and the culture of trust, shared knowledge, mutual respect and reciprocity practiced in the company.

Table 6: The mean and percentage of respondents on spiritual capital

Total Mean = 3.62 **Median = 3.60** **SD = 0.544**	
Spiritual Capital	
Survey Items	**Mean**
Have a strong faith in the present TM's higher management team in performing their duties to achieve TM's vision and mission statements	3.30
TM will be more profitable and prosper through financial and non-financial contribution to religious and philanthropic (love of mankind) activities.	3.57
Always considers environmental health and public social benefits in any planning, development and implementation of projects	3.46
TM will reap future business advantages by providing services in a non profit making areas	3.10
Thankful and loyal to TM and will never leave TM although other competitor is offering better salary and incentives.	3.87
Department shares a "common belief" with other departments in performing our duties to achieve TM's goals and mission	3.79
TM's core values; Total commitment to customers, uncompromising integrity, respect & care are understood, believed and internalized by employees	3.48
TM is strictly following the rules of corporate governance required by the government	3.78
Practice of good business ethics in daily business operation	3.77
Employees are sincere, honest and truthful in performing their duties	3.69
Employees are motivated, courageous and committed in performing their jobs	3.55
Will committed to work as usual, although I'm not been promoted like other colleagues, even juniors	3.78
Work at the best of my capabilities because I believed and practice 'working is part of my acts of devotion to God'	4.34
The Machiavellian principle; "the ends justify the means" is an unaccepted practice in my department.	3.40
Trust, shared knowledge, mutual respect and reciprocity are the culture of TM which result to continuous innovation to TM	3.55

4.2.5 Knowledge Management

The results in Table 7.0 and Table 8.0 with the overall mean of 3.35 show that the majority of the respondents seem to indicate that they are quite undecided when expressing their opinion in the practice of knowledge management in Telekom Malaysia. The overall rating shows that the mean for 'knowledge sharing among individuals, teams and departments is highly promoted and actively encouraged'

is the highest (3.73) and the 'knowledge creation between tacit knowledge and explicit knowledge is systematically managed' is the lowest (3.01).

Evidence seems to suggest that employees understand what the required knowledge they must have is and what is the level of competence and knowledge they currently possess. The process of seeking, learning, nurturing and applying the knowledge and skills acquired by employees are actively done and knowledge sharing among individuals, teams and departments is actively encouraged. The process of 'learning history' has been able to successfully improve their operational effectiveness and efficiency. Respondents seem to indicate that they are quite undecided in the process of knowledge development, knowledge creation, knowledge preservation, knowledge measurement, knowledge application and knowledge appreciation. They also express similar quite undecided opinion in their leaders are leading, coaching and developing their employees to become knowledgeable professionals, and the physical architecture and facilities of offices and their environment promote intensive knowledge development and sharing between them.

Table 7: The mean and percentage of respondents on knowledge management

Total Mean = 3.35 **Median = 3.46** **SD = 0.544**	
Knowledge Management	
Survey Items	**Mean**
Employees understand what is the required knowledge they must have to be a competent employee	3.71
Employees know exactly the level of competence and knowledge they currently possess to what they should possess	3.51
Employees actively and intensively seek their required competencies from TM's suppliers, customers and also through other efforts.	3.34
The process of learning, nurturing and applying the knowledge and skills acquired by employees are actively done to develop 'industries best practices'	3.51
Knowledge sharing among individuals, teams and departments is highly promoted and actively encouraged	3.73

Table 8: The mean and percentage of respondents on knowledge management (continue)

Total Mean = 3.35 Median = 3.46 SD = 0.544	
Knowledge Management	
Survey Items	**Mean**
Knowledge sharing, skills and competences are appreciated, appropriately recognized and rewarded	3.32
My department has a comprehensive development plan in concept ional, behavioral and technical abilities for our employees to develop their distinctive competencies	3.17
The knowledge creation between tacit knowledge and explicit knowledge is systematically managed to nurture further innovation	3.01
Knowledge and competences within employees, databases, documented manuals, customers and suppliers are captured, stored, updated in 'information system' and can be efficiently retrieved for constant usage.	3.17
To enable to produce innovation and sustain its performance continuous assess and evaluate the knowledge and competency level of our employees and our department	3.30
The physical architecture and facilities of offices and work stations and their environment promote intensive knowledge development and sharing	3.28
Individual department teams and cross-functional teams are actively functioning to address the changing and complex problems by leveraging their rich and diverse knowledge capabilities	3.28
Leaders are actively leading, coaching and developing their employees to become a self-driven professionals	3.35
Department is able to successfully improve operational effectiveness and efficiency through 'learning history' i.e. learning from past experiences, success stories and mistakes	3.60
Production of new knowledge through enhancing our capacity to learn and innovate is actively promoted.	3.39

4.2.6 Managing and Leveraging of Intellectual Capital

The results in Table 9.0 with the overall mean of 3.32 show that the majority of the respondents seem to indicate that they are quite undecided when expressing their opinion in the management and leveraging of intellectual capital management in Telekom Malaysia. The overall rating shows that the mean for 'achieving performance targets of key activities are more important than performing duties according to the established documented procedures' is the highest (3.63) and 'the present performance management system (MAPS) leads to the optimum leveraging of human capital in TM' is the lowest (2.86). Evidence seems to suggest that employees understand moderately high, the strategies and goals and of Telekom Malaysia and achieving the short-term performance results of key activities including financial are more important than performing duties according to the documented procedures and long-term value creation. Although Telekom Malaysia's organizational structure is a

traditional hierarchical structure, which hinders operational effectiveness and efficiency, departments give a balanced importance to financial, customer, internal business processes and innovation learning perspective as an important management approach.

It appears that respondents are quite undecided when expressing their opinion on the decision-making process, which is based on sufficiently accurate and reliable data and information analyses balanced with experience and intuition. Similar opinion is expressed in the issues of empowerment and their participation in decision-making, their chance to openly express their opinion and the appreciation of their contributions. They also show similar opinion when assessing the affect of new Telekom Malaysia's vision to mobilize and motivate the employees, the benefits of the high score of TMBEA and ISO 9000 certification on the performance improvement of the department, research and development activities, the sponsorship to the government activities and the reduction in practice of 'office politic'. Evidence seems to suggest that the present performance management system (MAPS) does not lead to the optimum leveraging of human capital in Telekom Malaysia.

Table 9: The mean and percentage of respondents on managing and leveraging of intellectual capital

Total Mean = 3.32 Median = 3.26 SD = 0.407	
Managing and Leveraging of IC	
Survey Items	**Mean**
Employees understand the goals and strategies used by TM to achieve the vision and mission statement	3.62
Department gives balanced important to financial, customer, internal business process and innovation learning perspective as an important management approach in daily operation	3.55
Achieving short term performance and financial results are more important than long-term value creation	3.52
Achieving performance targets of key activities are more important than performing duties according to the established documented procedures	3.63
Research and development activities for products, services, systems and human resources is important	3.17
The decision making process is based on sufficiently accurate and reliable data and information analyses balanced with experience and intuition	3.47
Present TM organizational structure is a traditional hierarchical structure which hinders operational effectiveness and efficiency	3.50
The present performance management system (MAPS) leads to the optimum leveraging of human capital in TM	2.86

Sufficient empowerment and participation are given to line managers to perform their duties to satisfy customers	3.33
High degree of 'office politics' hinders the creation and development of innovative teams	3.28
Units with ISO 9000 certification or score high in TMBEA consistently show significant performance improvements	3.22
TM's sponsorship of government's activities generate business, growth and future values to TM	3.15
Employees can express their opinions openly and a healthy, positive challenging culture exists in our working environment	3.19
My contribution is appreciated and TM is taking care of my future carrier development	3.05
TM's new vision will mobilize, motivate and improve employees performance	3.46

4.2.7 Performance Improvement

It appears that the results in Table 10.0 with the overall mean of 3.01 show that the majority of the respondents seem to indicate that they are undecided, when expressing their opinion on the performance improvement of Telekom Malaysia. The overall rating shows that the mean for 'Telekom Malaysia is a Malaysian telecommunication industry leader' is the highest (3.74) and 'Telekom Malaysia's market share is improving' is the lowest (2.48). Evidence seems to suggest that Telekom Malaysia's performance is leaning toward non-improvement performance in the aspects of forward looking organization, leadership index, employee satisfaction index, revenue growth, market share, profit growth, operating efficiency, to achieve and sustain superior performance, customer satisfaction index, on time delivery of products and services and success rates in new products and services launches. An improvement in performance seems to exist only in the area of Telekom Malaysia as a Malaysian telecommunication industry leader and Telekom Malaysia ability to compete globally.

Table 10 : The mean and percentage of respondents on TM's performance improvement

Total Mean = 3.011 **Median = 3.00** **SD = 0.609**	
TM's Perceived Performance	
Survey Items	**Mean**
TM is able to compete globally	3.53
TM is a Malaysian telecommunication industry leader	3.74
TM is a forward -looking organization	2.97
TM's 'Leadership Index' is high	2.84
TM's 'Employee Satisfaction Index' is high	2.83
TM is quickly responsive to local and international market needs	3.02
TM's revenue growth is improving	2.59
TM's market share is improving	2.48
TM's profit growth is improving	2.55
TM is improving operating efficiency	2.94
TM is always able to achieve and sustained superior performance	2.97
TM 'Customer Satisfaction Index' is improving	2.91
TM practices 'On Time Delivery' of its products and services to customers	2.89
TM achieves a high success rate in new product/service launched	2.74
TM is able to continuously produce competitive products and services	3.15

5.0 Concluding remark

In conclusion, from the above evidences, there are considerable presence of intellectual capital that will enable Telekom Malaysia to propel in the future, however, generally one can say that Telekom Malaysia is still below average when compared to the world-class organizations, in terms of the presence of spiritual capital, as discussed in the preceding parts before this. The current level and development of spiritual capital, has a strong relationship with the leadership and overall managing and leveraging of intellectual capital and knowledge management practices in Telekom Malaysia.

References

Abu Hamid Al-Ghazali (1975). *"Ihya Ulumuddin"*. Kaherah: Darul Shaab

Al-Buraey M.A. (2004). The impact of Value-Based Managerial Leadership On The Development Of Ummah In Islamic Countries. *International Seminar on Value- Based Total Performance.* 1-2 July 2004. Kuala Lumpur: Institute of Islamic Understanding Malaysia.

Al-Ghazali (1992). *Penenang Jiwa.Pengubatan & Rawatan.* Kuala Lumpur: Thinker's Library Sdn.Bhd.

Andriessen D. & Tissen R. (2000). *Weightless Wealth; Find Your Real Value in Future of Intangible Assets.* London: Financial Times Prentice Hall.

Andriessen D. (2001). Weightless Wealth: Four Modifications to Standard IC Theory, *Journal of Intellectual Capital* Vol. 2 No.3: 204-214.

Arthur B.(1996).Increasing Returns and the new World of Business. *Harvard Business Review.* July-August: 100-109

Bethune G. & Huler S. (1998), *From Worst to First, Behind the Scene's of Continental's Remarkable Comebacks.* New York: John Wiley & Sons, Inc.

Bierly III P.E and Daly P. (2002). Aligning Human Resource Management Practices and Knowledge Strategies, A Theoretical Framework. In: Choo C. W. and Bontis N. *The Strategic Management of Intellectual Capital & Organisational Knowledge.* New York: Oxford University Press, Inc. 277 – 295.
Head, Hands &Habits. Tennesse: J. Countryman.

Bontis N. ed. (2002). *World Congress on Intellectual Capital Reading.* United States: Butterworth-Heinemann.

Bontis N. (2001), Managing Organizational Knowledge by Diagnosing Intellectual Capital: Framing & Advancing the State of the Field. In: Choo C. W. and Bontis N. eds.(2003) *The Strategic Management of Intellectual Capital & Organisational Knowledge.* New York: Oxford University Press, Inc. 621-642.

Bontis Nick (1998), Intellectual Capital: An Exploratory Study That Develops Measures and Models, *Management Decision.* 36/2 (1998): 63-76.

Bontis N. (1999). *Managing and Organising Learning System by Aligning Stocks and Flows of Knowledge: An Empirical Examination of Intellectual Capital, Knowledge Management and Business Performance.* University of Western Ontario: PhD. Thesis.

Bontis N., Keow W.C.C. & Richardson S. (2000). Intellectual Capital and Business Performance in Malaysian Industries. *Journal of Intellectual Capital.* Vol.1, No.1: 85-100.

Boyett J.H. & Boyett J.T. (2001). *The Guru Guide to the Knowledge Economy The Best Ideas for operating Profitability in a Hyper-Competitive World.* USA: John Wiley & Sons Inc.

Brooking A (1996). *Intellectual Capital, Core Asset for the Third Millennium Enterprise.* London: International Thomson Business Press.

Buzan T. (2001). *The Power of Spiritual Intelligence.* London: Harper Collins Publishers Ltd.

Chatzkel J. (2002). *Intellectual Capital.* United Kingdom: Capstone Publishing

Chatzkel J. (2003). The collapse of Enron and the role of IC. *Journal of Intellectual Capital*, Vol. 4, No.2: 127-143.

Choo C.W. and Bontis N. eds. (2002), *The Strategic Management of Intellectual Capital and Organisational Knowledge.* United States: Oxford University Press.

Creswell J.W. (2003). *Research Design. Quantitative, Qualitative & Mixed Method Approaches.* 2nd edition. United States: SAGE Publications

Denscombe M. (1998). *The Good Research Guide, For Small-Scale Social Research Projects*. Buckingham: Open University Press.

Denscombe M. (2002). *Ground Rules for Good Research. A 10 Point Guide for Social Researchers.* England: Open University Press

Despain J. and Converse B. J. (2003). *...And Dignity for All, Unlocking Greatness with Values-Based Leadership.* New Jersey: Financial Times Prentice Hall.

Edvinson L. (1997). "Developing intellectual capital at Skandia". *Long RangePlanning* Vol. 30 No. 3: 266 – 273

Edvinson L. & Malone M.S. (1997). Intellectual Capital: Realising Your Company's True Value by Finding Its Hidden Brainpower. New York: HarperBusiness. Studying spirituality and religion in organisation. *Journal of Organisational Change Management.* Vol.14. No. 4: 335-351.

Gardner H. (1999). *Intelligence Reframed; Multiple Intelligence for the 21st Century.* New York: Basic Book.

Gerstner L. V.Jr. (2002). Who *Says Elephant Can't Dance? Inside IBM's Historic Turnaround.* San Francisco: Harper Business.

Hayton J. C. (2002). *The Effect of Intellectual Capital on Entrepreneurial Orientation in High Technology New Ventures*. Georgia State University, Atlanta: PhD. Thesis.

Hubert & Stuart D.(1984). From Socrates to Expert System.*Technology in Society.* Vol. 6: 217

Itami H. and Roehl T.W.(1991). *Mobilising Invincible Assets*. Cambridge: Harvard University Press (reprint edition)

Jaworski,B.J. and Kohli, A.K.(1993)."Market orientation: Antecedents and consequences", *Journal of Marketing*, (July) 1993: 53-70.

Kaplan R.S. & Norton D.P. (1996). *The Balanced Scorecard.* United States: President & Fellows of Harward College.

Lesser L.E. ed. (2000), *Knowledge and Social Capital, Foundation & Application.* United State: Butterworth-Heinemann.

Lucas J.R. (1999). *The Passionate Organization*. New York: Amacom.

Malaysian Communication & Multimedia Commission. Country Status Update Report – Malaysia. Asian Info-Communications Council 30th Conference. 12 – 16 April 2004. Kuala Lumpur. Asian Info- Communication Council. 2004. Document no. 82.

Marr B., Schiuma G. & Neely A. (2002), Assessing strategic knowledge assets in e-business, *International Journal of Business Performance Management.* Vol.4, No.2/3/4: 279 - 295.

Marr B., Schiuma.G. & Neely A. (2003). *The Dynamic of Value Creation-Mapping Your Intellectual Performance Drivers*. The Centre for Business Performance, Cranfield School of Management. "Unpublished"

Mayo A. (2000). The role of employee development in the growth of intellectual capital. *Personnel Review* .Vol. 29 No.4: 521-533.

Merriam S.B. (1997). *Qualitative Research and Case Study Application in Education.* San Francisco: Jossey-Bass.

Mouritsen (1998). "Driving growth: Economic value added verses intellectual capital". *Management Academy Research.* Vol. 9, No.4: 461-483.

Mouritsen J., Larsen H.T, Bukh P.N. & Johanson M.R. (2001). Reading on Intellectual Capital Statement. *Journal of Intellectual Capital.* Vol.2, No.4: 359-383.

Mouritsen J & Larsen H.T. (2001). Valuing the Future: Intellectual Capital Supplements at Skandia. *Accounting, Auditing & Accountability Journal.* Vol.14, No.4: 399-422.

Narver,J.C. and Slater,S.F.(1990).The effect of a market orientation on business profitability, *Journal of Marketing*. (October), 1990: 20-35

Nonaka I. & Takeuchi H. (1995). *The knowledge creating company*. New York: Oxford University Press.

Noor I. (1999). *Prophet Muhammad 's Leadership. The Paragon of Excellence Altruistic Management. A cross- application to modern management & leadership practice.* Kuala Lumpur: Utusan Publications & Distributors Sdn. Bhd.

Petty R. & Guthrie J. (2000). Intellectual Capital Literature Review: Measurement, Reporting and Management. *Journal of Intellectual Capital* Vol 1 No.2: 155-176.

Robson C. (2002). *Real world Research: A Resource for Social Scientist & Practitioners-Researchers* 2nd edition. Oxford: Blackwell Publishers.

Roos J., Roos G., Dragonetti N.C., Edvinson L. (1997). *Intellectual Capital: Navigating in the New Business Landscape*. London: Macmillan

Saint-Onge H. (1996). "Tacit knowledge: The key to strategic alignment of intellectual capital". *Planning Review*. Vol. 24, No.2: 10-14

Saint-Onge H.(2002). "Knowledge & Learning – The Two Sides of One Coin". *Knowledge Management Asia 2002*. 16-18.7.2002. Singapore: Arkgroup Asia.

Salam S. (1981). *Imam Ali – Hero of the People*. Singapore: Al-Haramain Pte.Ltd.

Shook Shane D.(2002). *Analyst and Investment Broker Attitude of Intellectual Capital Value*. Capella University: PhD. Thesis.

Stauffer D. (2000). *Business the Cisco Way, Secret of the Company that Makes the Internet*. United kingdom: Capstone Publishing Ltd.

Stewart T.A. (1997). *Intellectual Capital; The New Wealth of Organization*. New York: Doubleday

Stewart T.A. (2001). *The Wealth of Knowledge*. Great Britain : Nicholas Brealey Publishing.

Sullivan P.H. (1998). *Profiting from Intellectual Capital; Extracting Value from Innovation*. New York: John Wiley & Sons Inc.

Sveiby K. E. (1989). *The Invincible Balance Sheet*. Stockholm: The Konrad Group.

Sveiby K. E. (1997). *The New Organisational Wealth, Managing & Measuring Knowledge-Based Assets*. San Francisco: Berrett-Koehler Publishers, Inc.

Sveiby K.E. (2001). A Knowledge-Based Theory of the Firm to Guide in Strategy Formulation. *Journal of Intellectual Capital*. Vol. 2 No.4: 344-358.

Sveiby K.E. (2003). Strategy in the Knowledge Economy, Business as if Knowledge Matters. *24th McMaster World Congress 2003*. 15 – 17 January 2003. Hamilton: McMaster World Congress.

Taylor S.J. and Bogdan R. (1998). *Introduction to Qualitative Research Methods, A Guidebook and Resources*,3rd edition. New York. John Wiley & Sons.

Teece D.J. (1998). " Capturing value from knowledge assets, the new economy markets for know-how and intangibles assets". *California Management Review*. Vol. 40 No.3: 55-79

Telekom Malaysia Annual Report 1996. Kuala Lumpur: Telekom Malaysia.

Telekom Malaysia Annual Report 2003. Kuala Lumpur: Telekom Malaysia.

Walker D.C. (2001). *Exploring the Human Capital Contribution to Productivity Profitability and Market Evaluation of the Firm*. Webster University: DBa. Thesis.

Yin R. (1994). *Case Study Research: Design and Methods*, 2nd edition. Newsbury Park, CA: SAGE Publication, Inc.

Youndt M. A. (1998*). Human Resource Management System, Intellectual Capital and Organizational Performance*. Pennsylvania State University: PhD. Thesis.

Zack M.H.(1996).*Knowledge Management and Collaboration Technologies*. Knowledge and Strategy, Knowledge Strategy Group Inc. & Lotus Institute: 1 – 12.

Zohar D. and Marshal I. (2001). *SQ: Connecting with Our Spiritual Intelligence*. New York: Bloomsbury Publishing.

Zohar D. and Marshall I. (2004). *Spiritual Capital: Wealth We Can Live By*. Bloomsbury Publishing Plc.