

INTELLECTUAL CAPITAL MANAGEMENT IN A  
RETAIL COMPANY IN SOUTH AFRICA



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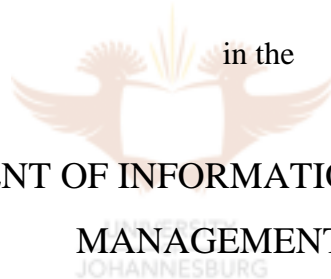
INTELLECTUAL CAPITAL MANAGEMENT IN A  
RETAIL COMPANY IN SOUTH AFRICA

by

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## DEDICATION

This dissertation is dedicated to my mom, Carina van der Westhuizen, who worked as hard as I did to get me where I am today. Without her love, support, prayers, empathy and belief in me I would not have reached my destination in this tumultuous journey.



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- God, who granted me the unique opportunity to fulfill this wish of my heart. This was an incredible opportunity and even though I might not have find out what I've expected to find, I've discovered many more unexpected and significant lessons that definitely will improve my future.

## ABSTRACT

The competitive landscape in the retail sector in South Africa is changing, and new models of competitiveness are needed to deal with the challenges ahead. The responses that usually occur in relation to the above statement reveal a new competitive reality, demanding that the organisation's capabilities will enable the retail company in South Africa to better serve their customers and to differentiate them from competitors.

This dissertation is about determining the status of the measurement and interpretation of intangible assets within a retail company in South Africa, and more specifically the JD Group as a furniture retailer. There are focused on the importance of the different aspects of intellectual capital i.e. human capital, structural capital and customer capital and the value that could be derived to aid the company in the retail industry. It is also intended to establish whether value can be added to investors, customers, line management, employees and the community, if the appropriate intellectual capital management tool is identified and implemented. It is viewed, both globally and in South Africa, as a core contributory factor in achieving business strategy.

It was established that knowledge processes and tools could be implemented and utilized to discover intellectual capital management as a valuable resource for the retail company. The spectrum of intellectual capital management tools is investigated and four methods of measuring intellectual capital are identified in the current literature: The Market capitalization method, the return on assets method, the direct intellectual capital method and the scorecard method. The scorecard models are identified as the most appropriate method to use in a retail company in South Africa based on the following characteristics: Monitoring of performance, reporting to stakeholders and uncovering of hidden value.

The retail industry in South Africa is very volatile and organizations should be geared to adapt to changes at a rapid pace. In order to achieve world-class status, it is important to understand that management and employees, together, need to champion the competitive organisation of the future. The future organisation will no longer be in business just for the sake of business, but with a clear intent to protect its most valuable asset, the future. 21<sup>st</sup> Century businesses will be in the business of the creation of future, sustainable businesses.

This dissertation explores the views as to the extent to which intangible assets contribute value, how this contribution can be measured through the use of intellectual capital management tools and what the status is of such measurement in the current retail company trading in South Africa.

Once the need for intellectual capital management in the retail company in South Africa is established, focus is also given to the resultant changes required in respect of specific practices and the introduction of an array of strategy focused interventions, all within the intangible assets arena. The selection of these interventions is very JD Group specific and focuses on those areas that will contribute to the strategic alignment of leadership, culture and technology within the Group's strategy, which is quite simply but also articulately captured in the Group's vision statement, i.e. "To become global leaders in our fields of expertise."



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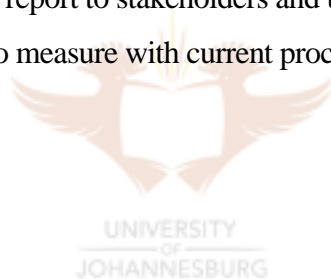
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## CHAPTER 1

### INTRODUCTION AND PROBLEM STATEMENT

#### 1.1 INTRODUCTION

Organizations fulfil their purposes and maintain their reasons to exist by what they know and how well they harness their knowledge. This fact should be a compelling reason for organizational governance and management, to nurture most diligently the people and the systems that create, preserve, disseminate, renew and deploy knowledge. In a company physical and mental or intellectual capital generates all the economic wealth and value (Nasseri, 1996).

Businesses need to recognize the complex matrix around them involving themselves, suppliers, customers and competitors, and the knowledge that is continuously flowing between all parties. To develop a competitive advantage, it is therefore vital to maximise the knowledge held within this network, and to do so better than others (Maddocks & Beaney, 2002:16).

Clearly knowledge is the fundamental input to all wealth generating processes. Without knowledge natural resources could not be developed, and most of the value of manufactured goods consists of their knowledge contents. So physical assets owe most of their value to knowledge, and yet most companies are not organized to benefit fully from leveraging knowledge. The challenges to capitalize on the knowledge advantage include: integration of knowledge management with strategy, and monetary evaluation of knowledge management (Nasseri, 1996).

A key motive for the current study is to develop better conceptualisation, measurement, and evaluation of knowledge assets. Generally it is true that those organisations that are rich in knowledge assets and intellectual capital demonstrate higher levels of growth and development. The process of devising valid measurement frameworks and models will also generate insights for developing better theoretical, conceptual and pragmatic understanding about the knowledge economy.

Concerns about efficiency and effectiveness of intellectual capital assets are evident in questions about the return on investment in such assets. However, a more important and

immediate issue that precedes such concerns is about how intellectual capital assets are conceptualised, understood, assessed and measured. The intellectual capital management tools offer a valuable contribution in this respect.

A critical and comparative analysis of existing measurement models is expected to reveal their strengths and limitations. Such analysis will also help in determining if and how any of the existing models may be adapted to meet the developmental needs of the public sector. A review of the models can also provide additional insights about improving current measurement frameworks (Malhotra, 2003).

In 1992, Kaplan and Norton introduced the balanced scorecard method. The balanced scorecard as intellectual capital management tool has been in use for more than a decade, therefore a large body of good practice and many case studies are available that show how it can be applied in organisations of any kind. It is therefore very important to measure the effectiveness of the intellectual capital management tool, because intellectual capital is an expensive commodity. The right intellectual capital used by the correct people at the right time can be extremely effective when trying to maintain current business (Davis, 2003). With intellectual capital, it is feasible to create wealth from very little that is tangible. To measure it requires metrics that are repeatable and quantitatively definable in Rand terms. This calls for methods that are independently verifiable. Intellectual capital investment should be as much a part of the planning and budgeting process as financial capital (Silverstone, 1999).

## 1.2 PROBLEM DEFINITION

As Sullivan (2000) rightly recognized, strategic-level decisions can easily be made with the aid of technology. The data lies at the fingertips of all levels of management. The main obstacle is the process of translating business vision to operational reality through effective decision-making.

But intellectual capital is mainly found in human experience and social context. Intellectual capital management is not about technology – technology is only an enabler. What is meant by managing intellectual capital is to pay attention to people, culture and organisational structure, as well as the technology to share intellectual capital successfully (Friedman, 1999). “Intellectual capital management is about managing know-how at the intersection of strategy, organisation, process and technology” (Friedman, 1999). Aggregated information does not automatically morph into intellectual capital. Intellectual capital is acquired in human minds

when work is performed in the field. Intellectual capital management is the practice of identifying, capturing, evaluating, systematizing, and applying information and insights for the purpose of driving strategic business performance (Friedman, 1999). Therefore, intellectual capital management needs a technologically driven tool for efficient decision-making activities. Intellectual capital management is to supply the right people with the right knowledge at the right time.

## PROBLEM STATEMENT

The primary objective of this study is to determine the status of the need for intellectual capital management in a retail company in South Africa.

### 1.3 OBJECTIVES OF RESEARCH

The study aims to establish whether there is a need for developing an intellectual capital management tool in a retail company in South Africa and which framework would be the best to use. This study commences with a study of knowledge management concepts including intellectual capital to establish a clear understanding of the importance of intellectual capital assets of a company. Then a review of existing measurement models will be given. These models' strengths, weaknesses and primary uses will be explored in order to understand the different goals for using different models. After the empirical study is performed and the need for an intellectual capital management tool is established, the models will be considered and recommendations will be made for developing an intellectual capital management tool in retail companies in South Africa. Suggestions will be offered for future theory development and research in intellectual capital management and measurement tools.

**OBJECTIVE 1: TO DESCRIBE THE IMPORTANCE OF MEASURING INTELLECTUAL CAPITAL BY MEANS OF INTELLECTUAL CAPITAL MANAGEMENT TOOLS**

- Describe and define knowledge management and intellectual capital management

Several aspects of knowledge management and intellectual capital management will be explored. Definitions of knowledge, knowledge management, intellectual capital and intellectual capital management will be declared. There are four knowledge enablers (leadership, culture, technology and intellectual capital management) and they will be briefly discussed to establish a background against which most



intellectual capital management frameworks and tools are built. There will also be focus on the various types of knowledge, its hierarchical break-up, and how it should be extracted and captured.

- Describe and define intellectual capital management tools

Intellectual capital management models can be used to measure diverse aspects of intellectual capital. Each intellectual capital model is used for a different purpose. Depending on the type of organisation, a different intellectual capital model will be utilised depending on the purpose for why intellectual capital needs to be measured. Before a decision can be made on which intellectual capital management model to use in an organisation, it should be understood why intellectual capital management is important in the organisation. Several successful intellectual capital management frameworks and tools will be identified and scrutinized. A comparison of the findings will be compiled to establish similarities and differences, as well as the most important strengths and weaknesses.

- Describe and define an instrument to measure intellectual capital
  - Market capitalization method
  - Return on assets method
  - Direct intellectual capital method
  - Scorecard method

**OBJECTIVE 2: TO ESTABLISH THE STATUS OF INTELLECTUAL CAPITAL MANAGEMENT IN THE RETAIL COMPANY IN SOUTH AFRICA**

- Describe the retail company in South Africa

The retail company in the current and future economic environment in South Africa will be briefly discussed. Retail companies are generally subjected to constant change, and should be prepared for adaptation. Relevant ways to ensure sustained growth and outsmarting the competition should be explored continuously. Without skilled employees, developed leaders, continuous innovation, the appropriate values and culture and more such intangible assets, the retail company will not be equipped to grow and expand in the harsh retail arena.

- Measure, analyse and interpret the status of intellectual capital in the retail company in South Africa

Intellectual capital management is a relatively new and emerging discipline. This field was not explored extensively in the retail arena, especially not in South Africa. To explore the importance and need for intellectual capital management in a corporate environment such as the JD Group Ltd, a retail company in South Africa, would make sense if the success other organisations derived from it was considered (refer Skandia navigator, Celemi's intangible assets monitor, Ericsson's cockpit communicator).

**OBJECTIVE 3: TO MAKE RECOMMENDATIONS ON WHETHER TO IMPLEMENT AN INTELLECTUAL CAPITAL MANAGEMENT TOOL IN A RETAIL COMPANY IN SOUTH AFRICA**

After establishing the status of intellectual capital management in the retail company in South Africa, it would be possible to determine whether such a tool would be useful to implement. Recommendations will be made based on the outcome of the empirical survey.

#### 1.4 RESEARCH DESIGN AND METHODOLOGY

##### 1.4.1 HYPOTHESIS AND CONCEPTUALISATION

The study will consist of a literature study, and is aimed at assessing whether the outcomes have materialised. The research design of this study will be presented in fairly broad terms at this point. A literature study involving current literature regarding intellectual capital management, knowledge management, intellectual capital management frameworks and guidelines on how to identify characteristics of a successful intellectual capital management tool is important. The status of intellectual capital management in a retail company in South Africa will be established. From there recommendations will be made to implement a successful intellectual capital management tool.

##### 1.4.2 SAMPLE DESIGN AND SAMPLING METHODS

Based on grounded theory, several knowledge-rich individuals in the JD Group will be interviewed to form an understanding of the status of intellectual capital management in the retail company in South Africa.

### 1.4.3 DEVELOPMENT OF RESEARCH QUESTIONS

From the literature study criteria will be derived to establish whether intellectual capital management might be useful in retail companies in South Africa.

### 1.5 STUDY LIMITATIONS AND ASSUMPTIONS

Intellectual capital management is a newly emerging discipline. There are not many sources and case studies available, regarding intellectual capital management in the retail industry. Mostly the literature focus around knowledge intensive companies such as consultancies. The impact of intellectual capital management in a retail company was not explored extensively. Many assumptions will have to be made.

### 1.6 OUTLINE OF STUDY

The study consists of six chapters:

In chapter 1 a general introduction to the identified research problem was given. The chapter also contains information about the research methodology and study limitations, with special reference to the problem statement and objectives of the study.

In chapter 2, knowledge and various aspects of knowledge management will be explored. Intellectual capital as a division of knowledge management will be explained. The four knowledge enablers will be discussed. Intellectual capital management tools will be viewed as a form of measurement, one of the four knowledge enablers.

In chapter 3, the characteristics of a successful intellectual capital management tool will be established by means of comparing several successful intellectual capital management frameworks and tools.

In Chapter 4 the retail company in South Africa will be explained.

In Chapter 5 the findings of the empirical survey with key players in a specified retail company (JD Group) will be given and interpreted.

Chapter 6 contains a summary of the study, followed by conclusions and recommendations on the need for an intellectual capital management tool in a retail company in South Africa. The chapter also contains suggestions for further research.

## CHAPTER 2

### INTELLECTUAL CAPITAL MANAGEMENT

#### 2.1 INTRODUCTION

In Chapter 1, the basic outline of the study was given. In order to understand the basic concepts around intellectual capital management, the study will commence with a brief discussion around knowledge as the discipline of which intellectual capital is an important aspect. Companies have started to discover the nature of knowledge as a powerful resource. Because it is such an important resource in the knowledge economy, there has been a phenomenal growth of attention on knowledge management (Allee, 2001).

Starting to use knowledge in an organisation means to start attending to processes that have been mostly ignored throughout most managers' working lives. Top companies will begin with a dedicated leader for knowledge management and may spend months developing a strategy and conceptual foundation (Allee, 2001). According to Friedman (2001) knowledge can be described as information in context to make it insightful and relevant for human action. Any managerial theory that does not create change is nothing more than an academic exercise. Even though technology has eliminated time and geography as boundaries in companies, the organisation will only succeed in changing if based on knowledge management to achieve learning and innovation that contributes to competitive advantage (Glasser, 1999). As a corporate asset, knowledge needs to be collected, organized, classified, disseminated and applied to future organisational problems (Stenmark, 2001:13).

The current chapter will focus on knowledge management and intellectual capital management, while the following chapter will investigate a sample of intellectual capital management tools that are being used and the tasks they achieve. It would therefore be appropriate to commence with the definition of knowledge.

#### 2.2 KNOWLEDGE

##### 2.2.1 INTRODUCTION

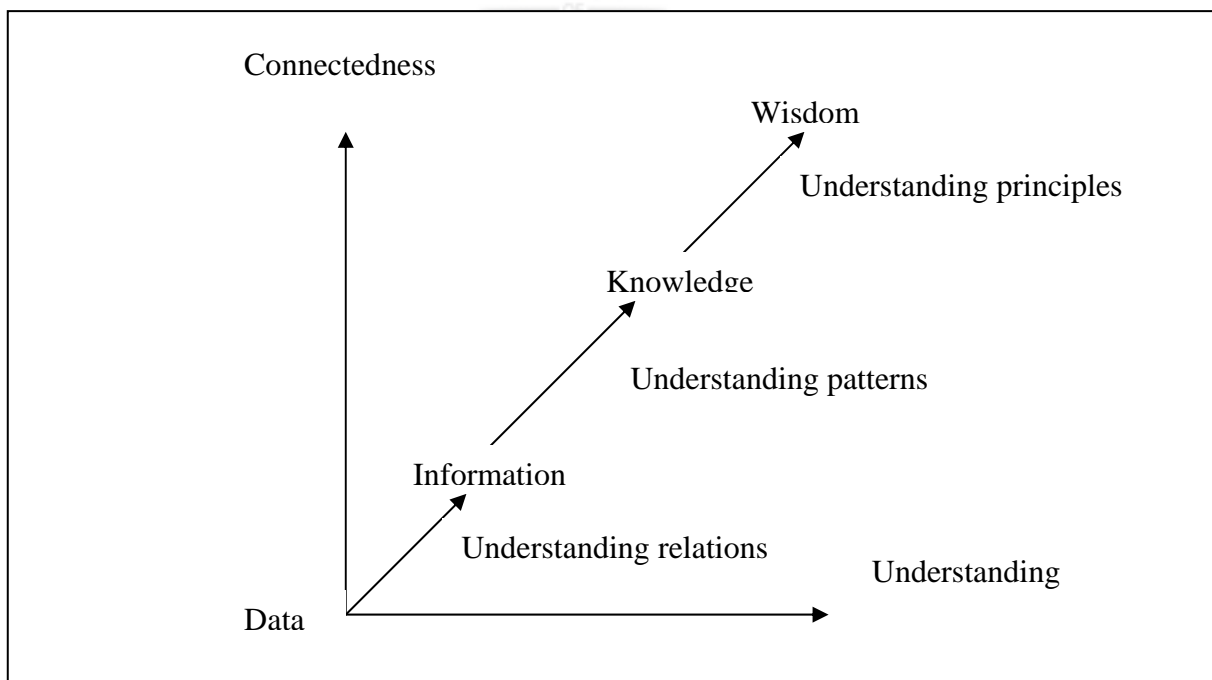
In the Industrial Age, capital, labour and services were the building blocks to create wealth. Since the rising of computer technology and the information age the way people work has

changed dramatically. Knowledge as a commodity has gained more and more popularity and was the reason that the Knowledge Economy emerged. Knowledge has such different characteristics from the traditional commodities and therefore it has to be treated differently. For instance, knowledge strives to be a public good. The creator of knowledge finds it hard to prevent others from using it. Knowledge can be protected to a lesser degree by instruments such as trade secrets protection and patents, copyright, and trademarks (Ernst & Young, 2001). But the kinds of knowledge that can be protected in this manner, only consist of a really small collection of knowledge. Knowledge processes and tools should be utilized to discover this resource.

### 2.2.2 THE DEFINITION OF KNOWLEDGE

According to Ash (2000) knowledge is information that has been found or created, processed, distilled and packaged by the human mind. Knowledge is part of the hierarchy made up of data, information, knowledge and wisdom.

As in Figure 2.2, data are raw facts (Bock, 1998a) and could be represented as an item or event out of context with no relation to other things (Bellinger, 1997). As opposed to data, information consists of facts with context and perspective (Bock, 1998a). Information exists out of relationships between data, and sometimes other information, but this does not actually



**Figure 2.1 The relationship between Data, Information, Knowledge and Wisdom**

Source: Bellinger, 1997

constitute information until it is understood. The character of information also tends to be mostly about the past or present, with little if any implication for the future, which makes it limited in context (Bellinger, 1997).

Knowledge is information with guidance for action (Bock, 1998a). Knowledge exists out of trends / patterns between data, information and possibly other knowledge. These patterns represent knowledge only when it is understood. Knowledge has an element of predictability to it: it is possible to suggest its past, present and future (Bellinger, 1997).

Wisdom understands which knowledge to use for what purpose (Bock, 1998a). The patterns of knowledge are what they are because of foundational principles. When these foundational principles are understood, then knowledge can be understood for what it is, and that constitutes wisdom (Bellinger, 1997).

Because of the extraordinary character of knowledge it has become a vital resource in organizations. Knowledge is not static, but is a fluid mix of framed experience, values, contextual information, and expert insight (Malhotra, 2000a). Customers, products, processes, culture, skills, experiences and know-how can also be included in the definition that makes up knowledge, but these are categorized as intellectual capital, a form of knowledge (Baker & Barker, 1997:65). The origin of knowledge is in the mind of the knower. Accumulated knowledge provides a framework for evaluating and incorporating new experiences and information. The quest to manage knowledge in any organization is vital, because knowledge often becomes embedded in explicit sources such as documents and repositories, or intangibles such as organizational routines, processes, practices and norms (Malhotra, 2000a).

### 2.2.3 CLASIFICACION OF TYPES OF KNOWLEDGE

There are several ways to classify forms and types of knowledge. Stenmark (2002:4) gives an extensive summary of the various views on types of knowledge available. He summarizes it as follows: “Nonaka distinguishes between tacit and explicit knowledge; Boisot advocates a typology consisting of proprietary, public, personal, and commonsense knowledge; Choo, building on Boisot, suggest a differentiation between tacit, explicit and cultural knowledge. Blacker, elaborating on Collins, speaks of embodied, embedded, embrained, encultured and encoded knowledge. Spender separates knowledge into explicit, implicit, individual, and collective. However, these views are all based on the assumption that some knowledge is

difficult to articulate through language and only exists in the form of experiences of which companies are not always aware. Polanyi, who coined the phrase tacit knowledge, first discussed this form of knowledge. Another assumption implicitly present in much of the knowledge management literature is that some knowledge can be expressed verbally, collected in books and manuals, and distributed electronically. This is referred to as explicit knowledge” (Stenmark, 2002:4). Rao (2003) classify types of knowledge as conscious knowledge, unconscious knowledge, conscious lack of knowledge and unconscious lack of knowledge.

The way this study accepts that to classify knowledge is differentiating between tacit and explicit knowledge, according to Takeuchi and Nonaka (1995). To Nonaka, explicit knowledge can be expressed in language and encoded in procedures and manuals, while tacit knowledge is a more personal form of knowledge, related to individual experience and involving personal factors such as belief systems, values and culture. This is a very powerful differentiation, which needs to be built into any knowledge management approach (Milton, 2000:17).

Explicit knowledge is described as formal, systematic and objective; it is generally codified in words or numbers. It can be derived from a number of sources including data, business procedures and external sources such as intelligence gathering. The problem of transmitting explicit knowledge is principally that logistical-knowledge, recorded, as text in the form of information, can be made accessible and transmitted between people through the use of groupware such as Lotus Notes.

Tacit knowledge is more intangible. It is made up of insights, judgment, know-how, mental models, intuition and beliefs and it is also context specific. It resides in an individual’s brain and forms the basis on which individuals make decisions and take action. Tacit knowledge can be both positive and negative, resulting from good or bad experiences in interactions with the organization. An understanding of the role of tacit knowledge can be useful in helping gain an insight into the relationship between consultant and client (Baker & Barker, 1997:66). Intellectual capital is therefore mainly categorized as tacit knowledge.

Tacit knowledge has become equated with unrecorded knowledge, and explicit knowledge with encoded or recorded knowledge. Splitting knowledge like this is useful for building a knowledge management system, as explicit knowledge can be stored in databases and treated

like information. However, it ignores the fact that the tacit knowledge, the ‘head knowledge’ comes in two sorts – the things you know you know (conscious), and the things you don’t know you know (unconscious) (Milton, 2000:17).

It is important to know what types of knowledge exist in order to accommodate the various types in the intellectual capital management frameworks, as well as in the intellectual capital management tools. Any knowledge management system that fails to find the things that people don’t know they know, that fails to mine the deep intellectual capital, will fail to deliver its full potential. In the new age of knowledge management, failure of the company to identify, capture and retain key knowledge may ultimately lead to placing the company at risk (Milton, 2000:17).

### 2.3 WHAT IS KNOWLEDGE MANAGEMENT?

Knowledge management is first and foremost a management discipline that treats intellectual capital as a managed asset. The primary “tools” applied in the practice of knowledge management is organizational dynamics, process engineering, and technology. These tools work together to streamline and enhance the capture and flow of an organization’s data, information, knowledge and intellectual capital and to deliver it to individuals and groups engaged in accomplishing specific tasks. These individuals, or knowledge workers, are unequivocally the most vital resource in the 21<sup>st</sup>-century company. The primary goal of knowledge management is to deliver the intellectual capacity of the firm to the knowledge workers who make the day-to-day decisions that in aggregate determine the success or failure of a business.

Knowledge management is not about creating a central database that is a complete replica of all that is known by employees or that is embedded in the systems they use. On the contrary, knowledge management is about embracing a diversity of knowledge sources, from databases, web sites, employees, and partners, and cultivating that knowledge where it resides, while capturing its context and giving it greater meaning through its relation to other information in the company. Knowledge management is not about turning knowledge workers into interchangeable components by plugging them into some corporate knowledge base. Its essence involves fuelling what knowledge workers do best. It is about partnering technology with a corporate culture and business processes, and using it as the vehicle to manage and deliver the business information and the expertise of fellow workers to the most fundamental driver of business growth: the knowledge worker.



As seen from the description of what knowledge is, it was found that knowledge encompasses both tacit knowledge (in peoples heads) and explicit knowledge (codified and expressed as information in databases, documents etc.) Skyrme (1999) states that a good knowledge management program will address the processes of knowledge development and transfer both basic forms of knowledge. Bock (1998a) defines knowledge management as the opportunity to add value to information inside the organisation and a major new strategic initiative for staying competitive.

Skyrme (1999) has a practical approach to defining knowledge management: The definition states some critical aspects of any successful knowledge management program: Knowledge management is the explicit (codifying that which is known) and systematic (planning and action taken will achieve benefits) management of vital knowledge (there should be a focus on specifics, resources are limited) – and it's associated processes (knowledge management is a set of activities with its own tools and techniques) of creation, organization, diffusion, use and exploitation.

Baker & Barker (1997:65) views knowledge as being created when information, combined with the experience, skills and personal capabilities (intellectual capital) of the reader are applied to the content and more importantly the context of a problem. This can be paraphrased in the formula:



Knowledge = Information + [Skills + Experience + Personal Capability]

If knowledge, therefore, results from the application of an individual's experience, skills and personality to a problem then it is virtually impossible to manage knowledge. The responsibility of knowledge management is continually to improve the effectiveness of the knowledge components by focusing on the key people, processes and technology and to develop an organization culture, which applies the concept of knowledge management as the norm. The views of Wiig (1996) on knowledge management support the idea that the purpose of knowledge management is to foster and promote the intelligent behaviour of the enterprise.

Therefore, knowledge management does not just include people, but also processes, technology and structure to support it. Accurate knowledge management can be measured by the quality of the resultant output, which is dependent on how each of the components of the knowledge formula is applied to a given situation. For instance, the excellent application of skills, experience and capabilities to poor information is not likely to result in insights or

learning that will add value to corporate wisdom. Likewise, the poor application of intuitive skills with high quality information is likely to lead to a sub-optimal outcome. Also, a technical solution that supports effective team working in environments where teams are located physically together in the same office, as well as virtual teams who do not necessarily meet face-to-face. A structure that minimizes the organizational barriers to knowledge capture and sharing, also aids knowledge management.

Knowledge management is a newly emerging, interdisciplinary business model dealing with all aspects of knowledge within the context of the organisation. Intellectual capital forms part of tacit knowledge that is a small but important area of knowledge management. Intellectual capital is very difficult to capture in any system, but is also an important resource. The concept of intellectual capital will be discussed in the next section.

## 2.4 INTELLECTUAL CAPITAL

Edvinsson and Malone (1997) and Brooking (1996) are pioneers in working with intellectual capital. According to Edvinsson and Malone (1997), intellectual capital takes three basic forms: human capital, structural capital, and customer capital.

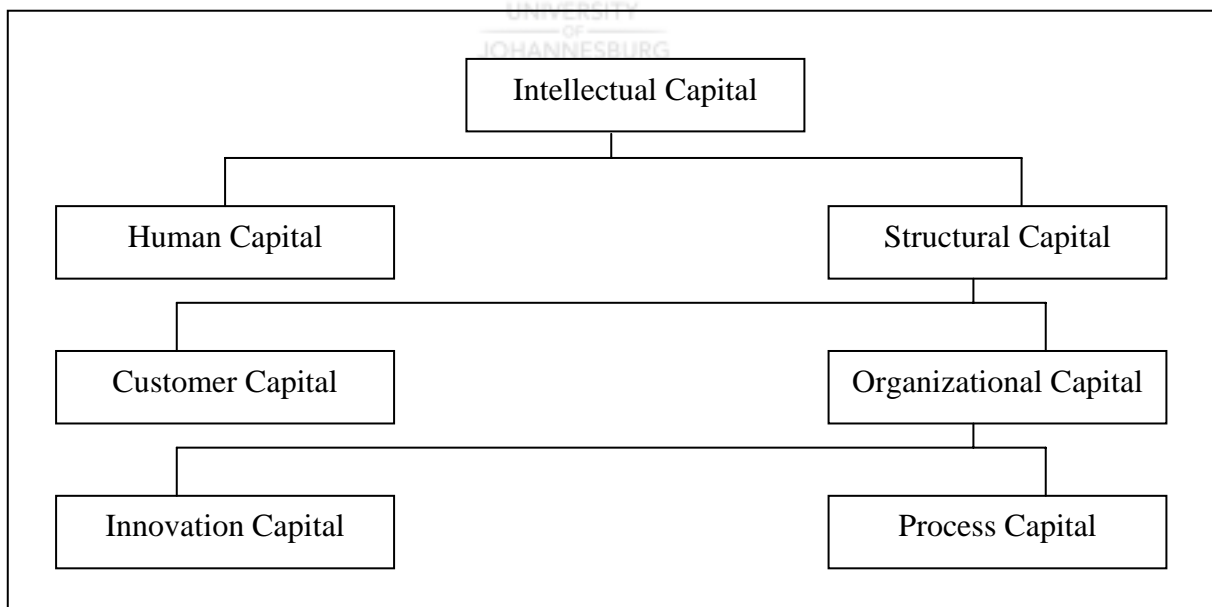
- Human Capital – the value that the employees of a business provide through the application of skills, know how and expertise (Maddocs & Beany, 2002:16-17). Human capital is an organization's combined human capability for solving business problems. Human capital is inherent in people and cannot be owned by organisations. Therefore, human capital can leave an organization when people leave. Human capital also encompasses how effectively an organization uses its people resources as measured by creativity and innovation.
- Structural Capital – What is left in the organisation when people go home: the supportive infrastructure, processes and databases of the organisation that enable human capital to function (Maddocs & Beany, 2002:16-17). Structural capital includes such traditional things as buildings, hardware, software, processes, patents, and trademarks. In addition, structural capital includes such things as the organization's image, organization, information system, and proprietary databases.

Because of its diverse components, Edvinsson and Malone (1997) classify structural capital further into organization, process and innovation capital. Organizational capital

includes the organization philosophy and systems for leveraging the organization's capability. Process capital includes the techniques, procedures, and programs that implement and enhance the delivery of goods and services. Innovation capital includes intellectual properties and intangible assets. Intellectual properties are protected commercial rights such as copyrights and trademarks. Intangible assets are all of the other talents and theory by which an organization is run.

- Customer Capital – consists of more identifiable items such as trademarks, licences, franchises, but also the less definable, such as customer relationships (Skyrme, 1998). Customer capital also takes note of the depth and breadth of customer interactions or relationships (Maddocks & Beaney, 2002:16). The notion that customer capital is separate from human and structural capital indicates its central importance to an organization's worth. The relationship with customers is distinct from other relationships either within or outside an organisation.

The Skandia Value Scheme adopted the Edvinsson and Malone (1997) view of intellectual capital. As seen in figure 2.2 Intellectual Capital consists of a number of components. In traditional economics models, normally only one of these building blocks is visualized – the Financial capital.

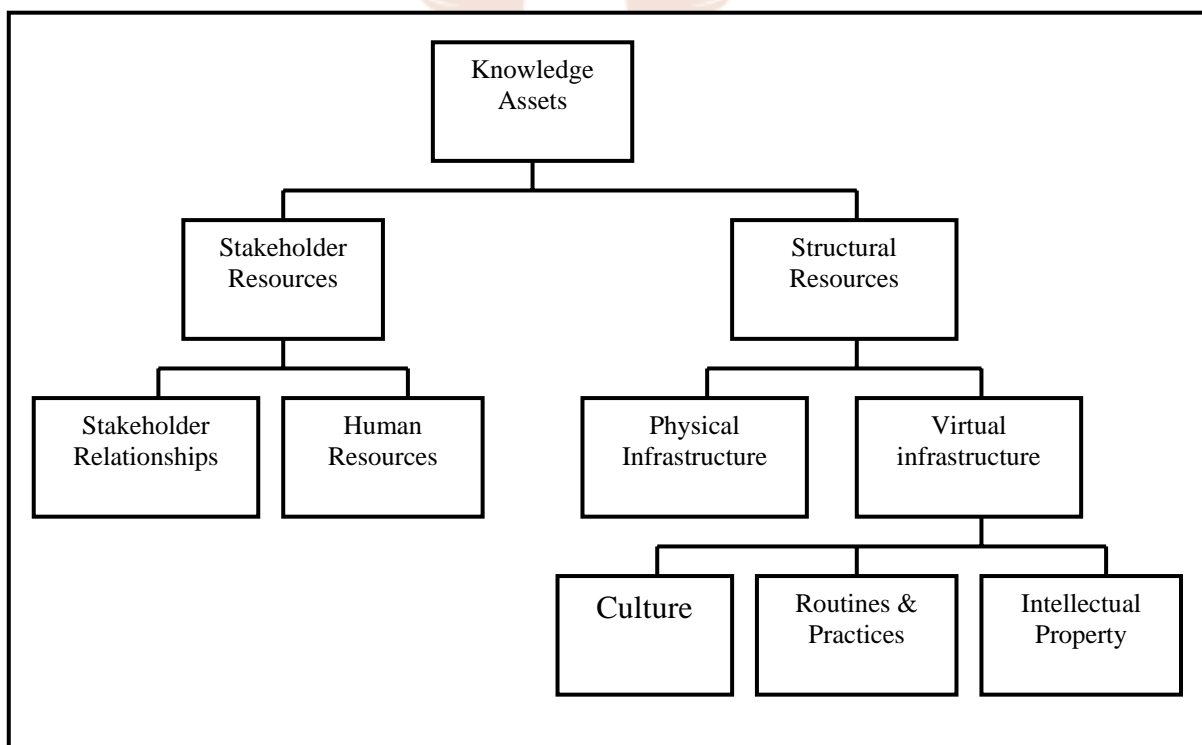


**Figure 2.2: The Skandia Value Scheme**  
Source: Skandia AFS, 2003

Brooking (1996:13) suggests that intellectual capital comprises four types of assets: Market assets, intellectual property assets, human-centered assets, and infrastructure assets. Market assets consist of such things as brands, customers, distribution channels, and business collaborations. Intellectual property assets include patents, copyrights, and trade secrets. Human-centered assets include education and work-related knowledge and competencies. Infrastructure assets include management process, information technology systems, networking, and financial systems.

There are also less well known views on the classification of intellectual capital. Marr, Schiuma and Neely (2003) divide intellectual capital into two organizational resources: The Stakeholder Resources and the Structural Resources. According to them, this distinction reflects the two main components of an enterprise, its actors that can be either internal or external to the organization, and its constituent parts, i.e. the elements at the basis of the organizational processes.

Figure 2.5 illustrates the hierarchy of knowledge assets with its sub-classifications. Stakeholder Resources are divided into Stakeholder Relationships and human resources. The



**Figure 2.3: Knowledge Assets**

Source: Marr et. al, 2003

first category identifies all external actors of a company while the second represents the internal actors. Structural resources are split into physical and virtual infrastructure, which

refers to their tangible and intangible nature respectively. Finally, the virtual infrastructure is further sub-divided into culture, routines and practices and intellectual property (Marr et. al, 2003).

It is realized more and more that intellectual capital accounts for a major share of an enterprise's total value. Because the theory of intellectual capital is such a new discipline, there are many more ways to classify intellectual capital. For the purposes of this study, the classification of Edvinsson and Malone (1997) will be used where intellectual capital is divided in human, customer and structural capital.

In order to manage intellectual capital it must be measured. There is a plethora of new measurement approaches that all have the aim of synthesising the financial and non-financial value-generating aspects of the company into one external report. Principal among the new reporting models is the intangible asset monitor (Sveiby, 1997; Celemi, 1999); the balanced scorecard (Kaplan and Norton, 1992; 1996); the Skandia value scheme (Edvinsson and Malone, 1997; Edvinsson, 1997); and the intellectual capital accounts (Denmark, Danish Agency for Trade and Industry, 1998). Chapter three will elaborate more on these measurement models.

## 2.5 KNOWLEDGE MANAGEMENT VS INTELLECTUAL CAPITAL

Roos, Roos, Edvinsson and Dragonetti (1997) define intellectual capital as “a language for thinking, talking and doing something about the drivers of companies' future earning”. They describe intellectual capital as a continuous thinking to the problem of managing knowledge in organizations, and emphasize that the definition of intellectual capital must be clear, and it must be measurable.

If knowledge is part of human capital, then managing knowledge is part of the structural capital. It reflects directly on the vision of intellectual capital as an incentive for knowledge management elaborated ahead. Intellectual capital can be considered as the 'knowledge' phase in accounting; If raw financial data have been taken, and put into a form of information in order to give information in the accounting reports, the knowledge of the firm that is mostly tacit, was created in the mind of the reader, be it an accountant, investor or someone else using other various tacit and explicit sources to inform. The intellectual capital movement is trying to make as much of this knowledge as possible explicit; much of which arrives in qualitative data, and qualitative information.

The basic driver behind knowledge management is the premise that, just as an organization producing capital goods would not allow its tangible assets to be under-utilised or unmanaged, an organization producing information and knowledge should not let its intellectual assets be under-utilised or unmanaged.

Indeed the complexity of knowledge as a resource, hence of knowledge management and intellectual capital, prevented attempts at integration or even coherent alignment. The tensions that lay beneath the surface between knowledge management and intellectual capital are derived from their basically different nature in relation to the conservative production factors (Land, Capital, Labour), because intellectual capital relates to “capital”, whilst knowledge management relates to “labour”. Yet the behaviour of intellectual capital is not the same as capital; “Intellectual capital is, even if it refers to ‘capital’, not a conventional accounting or economic term” complying with other rules (i.e. of depreciation, creation).

Knowledge, and managing all of its elements (i.e. processes, components, forms) becomes the basis for managing the organization’s intellectual capital. The intellectual capital is then transformed through its value to the organization into owned intellectual property. Hence, the research seeks to better explore knowledge management as a methodology, which moves us towards intellectual capital and property, the process becoming part of it in itself.

## 2.6 KNOWLEDGE ENABLERS



According to Skyrme (1997a) there are a variety of success factors that are part of the recipe for the successful implementation of an intellectual capital management program. The four knowledge enablers:

- The creation of a knowledge culture that supports innovation, learning and knowledge sharing. This is usually supported by appropriate reward mechanisms.
- A knowledge leader or champion - A dedicated leader, who actively drives the knowledge agenda forward, creates enthusiasm and commitment. Together with the knowledge leader, buy-in from top management is vital. A CEO who recognizes the value of knowledge and who actively supports the knowledge team that supports and implements the vision, and drives the knowledge agenda forward is invaluable.

- Technology – A technical infrastructure that supports knowledge work (knowledge support tools, intranets, groupware, decision support, data mining and document management).
- Measurement – It is important to measure the projects and business processes that are being improved through knowledge management tools, and to let the users evaluate the contribution (Axelsson & Landelius, 2002).

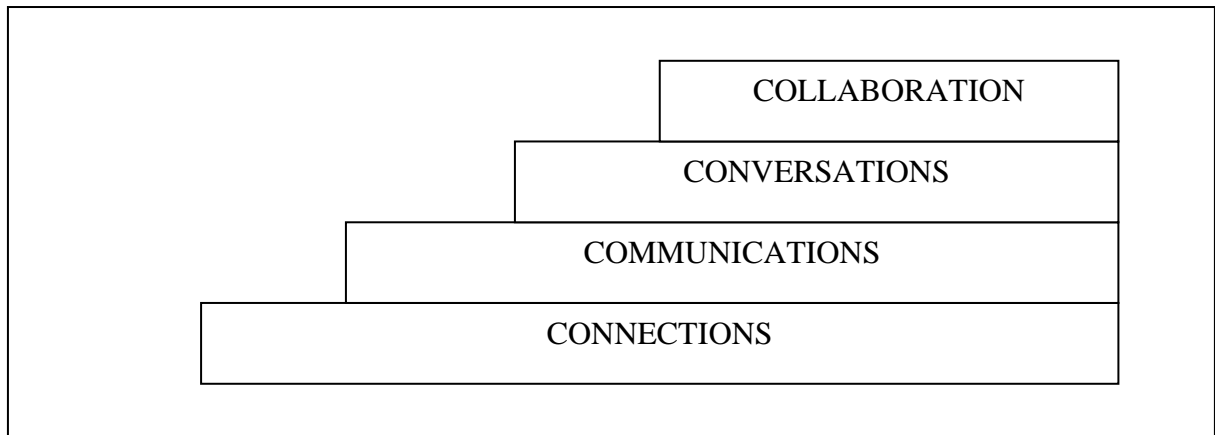
A deeper look into the knowledge enablers is required to understand what impact they have on the choice of an intellectual capital management tool.

### 2.6.1 CULTURE

Cultures are not born, they are created. Cultures are the product of the working environment people work in. The current culture is the product of the work environment of the Industrial Age. The current culture is not in itself a problem, but roadblocks to knowledge sharing can indicate deeper issues involved (Ash, 2000). The issue of work culture is mostly perceived that employees won't share knowledge, but the actual underlying cause is the way the work gets organized. The knowledge age causes enormous cultural changes. The Internet changes the way companies do business, and are responsible for the creation of the global economy. Disintermediation (cutting out of the middle man) is one example of how the culture changes require collaboration and alliances within and across professions (Ash, 2000). In the new knowledge age new roles are given to workers and new terms are used. A knowledge worker is a person who processes knowledge and converts knowledge into real value. A knowledge user (not worker) does not add value. A new role is created in the human resources field because the need for managing human knowledge becomes more prominent (Ash, 2000). People are the carriers of knowledge capital. Their brains are repositories of an accumulation of insights about "how things work here" – something that is often labelled with the vague expression "company culture" (Strassmann, 1998). However, it was shown in a study by the US Department of Labour that the average worker uses less than 30 percent of what they know in the course of carrying out their job (Ash, 2000). Change to a knowledge culture seems to be an extremely difficult task. The shift from ownership of knowledge (individual to corporate) to sharing knowledge cannot occur unless cultures are changed at every level of the organisation (Ash, 2000).

### 2.6.2 TECHNOLOGY

Knowledge management requires changes in established technical architectures. Tools and supporting processes are needed at several levels. As seen in figure 2.2, at the base level there is the requirement that people should be able to connect into the knowledge whenever the need the information and wherever they are (in the office, at remote sites, on the move etc.)



**Figure 2.4: Levels of an IT Knowledge Infrastructure**

Source: Skyrme, 1997b

At the communications level, mechanisms for threaded conversations and structure collaborative work must be implemented (E-mail, groupware etc). Each layer depends on the one below, and as there are moved upwards through each architectural layer, more of the challenges depend on people and managing the organisation, rather than being technology related (Skyrme, 1997b). Most large organisations are still between the bottom two levels. From the perspective of a knowledge architect, frameworks are used to indicate how technology supports the intellectual capital management process.

An important result of intellectual capital management technologies is that of innovation, the creation of new knowledge and its conversion into valuable products and services (Amidon, 1997). This could also be referred to as intellectual capital innovation. An environment is required where innovation and creativity are able to flourish, and knowledge is encapsulated in a form where it can be applied. A way to capture intellectual capital is not only to embed it into intellectual capital management solutions, but also to add knowledge-enriching features. Some knowledge-enriching features are:

- Addition of contextual information to data (Where was this information used? What factors need to be considered when using it?)



- Making use of multimedia (Adding video clips or voice to databases of best practice or problem solution databases).
- Providing annotation (By adding informal notes to data-items).
- Qualifying information (When users are able to comment on the quality of information, details of originator).
- Providing links to experts. (Giving contact information to contact an expert on the data).

Tacit knowledge is transferred by all these means. The solution chosen should be able to provide links that will add new levels of interaction, not just person-to-computer but person-to-person. From an intellectual capital management perspective, the most important responsibility of IT is to create and sustain a connected environment for knowledge exchange. This connected environment, which is based on a complex repository of information resources dispersed across many individuals, groups and information types, is the technical embodiment of a corporate memory. It is a complex well of tangible and intangible knowledge assets, and a vast information resource (Ovum, 2000:32).

To create and maintain a corporate memory, the component of an integrated intellectual capital management system needs to support four key processes for knowledge exchange. These are:

- Collaboration services: which provide the environment for intellectual capital sharing.
- Discovery services: which help users to retrieve and analyse (to understand, in essence) the information in the corporate memory.
- The knowledge repository: which provides the intellectual capital management functions for captured knowledge; and
- The knowledge map: which provides a corporate scheme for knowledge classification.

A great deal of the corporate memory is made up of knowledge that is tacit in nature (typically held in unstructured formats). It needs, therefore, to be carefully scanned and categorised in order to be fully searchable and accessible through a portal (Ovum, 2000:33).

<b>Application layer</b>	Competitive intelligence	Best-practice Systems	Product development	Customer relationship management		
<b>Interface</b>	Knowledge portal					
<b>KM services</b>	Discovery services		Collaboration services			
<b>Corporate taxonomy</b>	Knowledge map					
<b>Content management</b>	Knowledge repository					
<b>Infrastructure</b>	E-mail, file servers, and internet/intranet services					
<b>Information &amp; knowledge sources</b>	Word processing	Databases	Electronic document management	E-mail	Web	People

**Figure 2.5. The model of the knowledge management infrastructure shows how various parts of the system obtain, store, classify, and distribute knowledge**

Source: Ovum, 2000:33

Knowledge management can be boiled down to the simple concept of people, places and things and three core technologies (Loria, 2002:24); expertise location, search and document management as depicted in figure 2.5. (Creation & discovering, learning & sharing, management & organisation). While the idea of implementing an intellectual capital management solution may seem daunting to some companies, there is a simple strategy that companies can undertake to make the process more manageable. Many companies find it easiest to begin by initiating a document management strategy to organise their documents and manage them throughout their life cycles, including authoring, review, approval, distribution and archiving. Document management enables employees to easily locate the most up to date version of a document, so there are never multiple versions floating around the enterprise.

The next step in the process is usually to deploy a search strategy. Companies need to be able to find the information that is stored in different formats within their organisations such as databases, documents and e-mails. With search technology, employees can efficiently and quickly search varied repositories – both internal and on the web – from a single interface.

Intellectual capital management solutions as depicted in Figure 2.5 bind these technologies together and provide an entry point (portal) to the knowledge that exists within an organisation. Intellectual capital management solutions take the document management and search solutions one step further by organising the information by subject in taxonomy and also by linking the experts within a company to the subject matter topics. Employees can then put the information available into context by collaborating with the subject matter experts within their organisations (Loria, 2002:25). There are a number of technologies commonly thought of when the term “knowledge management” is intoned. In table 2.1 a list developed by Dataware Technologies (Bock, 1998a) is shown.

Table 2.1: Knowledge practices

CREATING AND DISCOVERING	Creativity techniques Data Warehousing, Data and Text Mining Environmental Scanning Knowledge Elicitation Content Analysis Information Retrieval Engines Relational and Object Databases Brainstorming Applications Intranets
SHARING AND LEARNING	Communities of practice Learning networks Sharing Best Practice After Action Reviews Structured Dialogue Share Fairs Cross Functional Teams Decision Diaries Electronic Publishing Systems Groupware and Workflow Systems Push technologies and agents
ORGANIZING AND MANAGING	Knowledge Centres Expertise Profiling Knowledge Mapping Document Management Systems Information Audits / Inventory IRM (Information Resources Management) Measuring Intellectual Capital Human Relations and Leadership Management and supervision processes that define culture and reward systems

Source: Bock, 1998a

### 2.6.3 LEADERSHIP

In many large organizations, and some small ones, a new corporate executive is emerging – the chief knowledge officer. Companies are creating the position to initiate, drive, and coordinate knowledge management programs (Earl, 1999). A knowledge leader is a person who is responsible for ensuring that an organization maximises the value it achieves through one of its most important assets – knowledge (Skyrme, 1997c). The knowledge leader has two principal design competencies. They are technologies and environmentalists. They should encourage and initiate investments in information technology and also in the social environment. They have to be able to manage both sorts of projects (Earl, 1999). They should also have a broad base of experience within a business. It will be helpful when they have circulated through the company and developed a holistic perspective (Duffy, 1998).

Knowledge leadership is a very important enabler because it can achieve the following advantages:

- Maximizing returns on investment in knowledge – people, processes and intellectual capital.
- Exploiting of intangible assets (know-how, patents, and customer relationships).
- Repetition of successes and sharing of best practices.
- Improving innovation by commercialisation of ideas.
- Avoidance of loss of knowledge and leakage after organizational restructuring.

Most CKO's are responsible for the following tasks and should have some of the following leadership skills:

- **Conceptual thinking:** The knowledge leader should be geared to develop an overall framework, compensating for the big picture. He/she should understand the wider knowledge context and should be someone who has a passion to discover the knowledge in employee's heads, and value it and put it to use in the company (Bock, 1998b, Skyrme, 1997c).
- **Advocacy:** Must articulate and actively promote the knowledge agenda and justify it within and beyond the company, sometimes against cynism and hostility (Skyrme, 1997c)

- Project and people management: He/she should be able to oversee a variety of activities. Attention to detail and motivation of people is vital (Skyrme, 1997c).
- Facilitation of connections, coordination and communication: Good communication and internal political skills as well as listening skills will help the knowledge leader succeed.
- Overseeing of the development of the knowledge infrastructure: “hard” and “soft”.

The CKO should have enough interest in and comfort with technology and its dramatic changes to be able to understand the technological side of how the knowledge management process might develop (Bock, 1998b).

The knowledge leader should be the advisor to the CEO. He/she should be politically adept and be the generator and custodian of information management systems in the business (Language, 2001:16).

The characteristics of the CKO are that of a hybrid manager. The CKO should be able to take a broader perspective with a great appreciation of business knowledge. He/she should see the big picture in trends, and communicate a whole range of strategic messages in a form that employees can understand and use (Language, 2001:16; Bock, 1998b).

#### 2.6.4 MEASUREMENT



Most definitions describe measurement as the process of acquiring and processing information relevant to objectives. Measurement can be considered a supportive management tool. A performance measurement system has three constituent parts (Skyrme, 2002):

- Individual measures that quantify the efficiency and effectiveness of actions.
- A set of measures that combine to assess the performance of an organisation as a whole.
- A supporting infrastructure that enables data to be acquired, collated, sorted, analysed, interpreted and disseminated.

The main objective of knowledge management is to improve the performance of the organisation and to help it to achieve its objectives. A bilateral approach has been recommended that seeks to measure both outcomes and activities.

Measuring outcomes focuses on the extent to which a project or a process achieves its stated objectives. The success of the project or process serves as an alternative measure for the success of the intellectual capital management practices embedded in it (Skyrme, 2002). Intellectual capital management is seen as an integral tool for improving a project or process, rather than as something separate. For example, outcomes might be measured in terms of the reduced cost of a process, improved efficiency, and the reduction in time taken to do it, the improved quality of delivery and more.

Measuring activities then shifts the focus onto the specific intellectual capital management practices that were applied in the project or process. What were the specific intellectual capital management activities behind this practice and what was their effect? In measuring activities, you are looking specifically at things like how often users are accessing, contributing to, or using the intellectual capital resources and practices that have been set up. Some of these measures will be quantitative ('hard') measures such as the number and frequency of hits or submissions to an intranet site per employee. However these measures only give part of the picture – they do not tell you why people are doing what they are doing. Hence to complete the picture, you will also need qualitative ('soft') measures by asking people about the attitudes and behaviours behind their activities (Skyrme, 2002).

Thus, measurement enables the organization to see whether or not it is moving toward its goals. There are various aspects of measurement such as valuation of knowledge content, capabilities, and potential opportunities for their utilization; measuring intellectual capital processes, and locating areas of improvement. These factors aid in the measurement of the contribution of intellectual capital and intellectual capital flows. Valuation of intangible assets is made possible by the new metrics like those in Skandia's Navigator or the Intangible Assets Monitor or the balanced scorecard. These methods of measurement balance financial performance indicators with non-financial measures that underpin value creation (Skyrme, 2002).

Measurement is considered the least developed aspect of knowledge management. However, without measurement, it would be unlikely to be able to establish what works and then make informed judgment regarding what to continue doing and what to adjust.

There are a number of approaches that are increasingly being used to measure the value of, and progress in, knowledge and intellectual capital management in organizations. Some of

the most common approaches are outlined here for the purposes of providing a general overview (National Electronic Library for Health, 2003):

#### 2.6.4.1 MEASURING THE IMPACT OF INTELLECTUAL CAPITAL MANAGEMENT ON THE ORGANISATION'S PERFORMANCE

When intellectual capital management is implemented as a tool for performance management, the most logical approach is tie-in measurement of intellectual capital management with the organization's performance management systems. This leads to a two-pronged approach that seeks to measure outcomes and activities. Measuring outcomes focuses on the extent to which a project or process achieves its stated objectives. Measuring activities shifts the focus onto specific intellectual capital management practices that were applied in the project or process. In measuring activities, things like how often users are accessing, contributing to, or using the intellectual capital resources and practices that have been set up, are being used (National Electronic Library for Health, 2003).

#### 2.6.4.2 THE BALANCED SCORECARD

An increasingly popular approach to measuring an organization's performance and one that is being widely adopted in intellectual capital management is the balanced scorecard. In contrast to traditional accounting measures, the balanced scorecard shifts the focus from purely financial measures to include three key measures of intangible success factors. These roughly equate to the three components of intellectual capital – namely human capital (learning), structural capital (processes) and customer capital. This intellectual capital management model, which is about learning and growth, is measured as an integral and yet distinct part of overall organizational performance (National Electronic Library for Health, 2003). More attention will be given to this aspect of measurement in Chapter 3.

#### 2.6.4.3 RETURN ON INVESTMENT (ROI)

Most initiatives that require resources will be expected to show a return in investment (what benefits did the organization get to justify the costs involved). Intellectual capital management is no exception. The problem is that both costs and benefits of intellectual capital management can be notoriously difficult to pin down. Benefits of this approach are the measurement of increased knowledge sharing, faster learning and better decision-making. A number of approaches have been developed for showing financial returns on intellectual capital management assets. These approaches will not be explored in the current study.

#### 2.6.4.4 THE INTELLECTUAL CAPITAL MANAGEMENT LIFECYCLE

Some organizations measure the progress of their intellectual capital management activities in terms of their maturity (how far down the line are they in implementing intellectual capital management practices and ways of working). The American Productivity and Quality Center has developed a framework known as Road Map to Knowledge Management Results: Stages of implementation. The Map has five stages and there are measures associated with each stage (National Electronic Library for Health, 2003). The detail of this road map is beyond the scope of the current study.

#### 2.6.4.5 EMPLOYEE SURVEYS

Given the importance of people in intellectual capital management, employee surveys can be a useful addition to the measurement toolbox. Surveys can be used to assess aspects of organizational culture and the extent to which people's opinions, attitudes and behaviours are, or are not changing. Obviously such surveys measure people's subjective perceptions and these may or may not reflect reality, but in many ways that can be their benefit, as people's perceptions will determine their behaviours with respect to intellectual capital management. In order to be effective, it is vital that people with the required expertise carry out any such surveys, either in-house or by external consultants (National Electronic Library for Health, 2003). This aspect of measurement is catered for in the human and customer capital divisions of intellectual capital. The balanced scorecard approach includes these factors and will be investigated in chapter 3.

#### 2.6.4.6 MEASURING THE VALUE OF INTELLECTUAL CAPITAL ASSETTS

As well as measuring the progress and value of intellectual capital management initiatives, organizations are developing ways to measure the value of intellectual capital assets. The traditional balance sheet is increasingly being regarded as an incomplete measure of organizations worth, as it does not place a value on intangible assets such as knowledge or intellectual capital. As already mentioned, intellectual capital is commonly regarded as having three components: Human, structural and customer capital. There are a number of key models for measuring the value of intellectual capital. Among the best known are: Skandia Navigator, and its associated value creation model, Sveiby's Intangible Assets Monitor, Intellectual Capital Services IC-index and M'Pherson's inclusive value methodology (IVM) (National Electronic Library for Health, 2003).



The knowledge enablers are all very important aspects on their own, but it requires a certain proficiency to blend them together into a sound working process where the company gains optimum advantage from the knowledge created and used.

Therefore certain frameworks were developed in order to manage intellectual capital in an effective and efficient way.

## 2.7 CONCLUSION

Intellectual capital management is the business driver pushing organisations into the 21<sup>st</sup> century. High on the corporate agenda and disseminating throughout the workplace, intellectual capital management is reshaping corporate culture, business processes and technological implementation to promote success.

In chapter 2 the term knowledge management was examined. In order to form an understanding of knowledge management, the terms data, information and knowledge were defined. Data was found to be a set of discrete, objective facts about events. Information can be described as a message, meant to change the way the receiver perceives something, to have an impact on his judgement and behaviour. Knowledge can be described as a fluid set of framed experience, values, contextual information, and expert insight, that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organisations, it often becomes embedded not only in the documents or repositories but also in organisational routines, processes, practices, and norms (Brakenseik, 2000:26-28).

Several classifications of types of knowledge were discussed. The most important classification for this study is the difference between tacit and explicit knowledge according to Takeuchi and Nonaka (1995). Explicit knowledge can be translated into documents and manuals, and is formal, systematic and objective. Tacit knowledge is related to individual experience and involves personal factors such as belief systems, values and culture and intellectual capital assets are mostly classified as tacit knowledge. It is difficult to codify tacit knowledge.

It was found that according to Skyrme (1999) knowledge management is the explicit and systematic management of vital knowledge - and its associated processes of creation, organization, diffusion, use and exploitation. Skyrme (1999) also states that a good

intellectual capital management program will address the process of intellectual capital development and transfer for both tacit and explicit knowledge. Intellectual capital management does not just include people, but also processes, technology and structure to support it. The relationship between knowledge management and intellectual capital was outlined. Intellectual Capital that could be subdivided into human capital, structural capital and customer capital is the intangible source that makes it possible to generate annual profits.

The four knowledge enablers as success factors in the implementation of an intellectual capital management program were discussed. Creating a knowledge culture that supports innovation, learning and knowledge sharing is of importance. A knowledge leader should drive the knowledge agenda forward, advocate knowledge management and be responsible for establishing the knowledge culture, technologies and structures to support the intellectual capital management program. An appropriate technological infrastructure is of vital importance to support all intellectual capital processes in the intellectual capital program. Measurement was defined as the process of acquiring and processing information relevant to objectives. Measurement can be considered a supportive management tool. A performance measurement system has three constituent parts e.g. Individual measures that quantify the efficiency and effectiveness of actions, a set of measures that combine to assess the performance of an organisation as a whole and a supporting infrastructure that enables data to be acquired, collated, sorted, analysed, interpreted and disseminated.

In the following chapter a comparison of several intellectual capital management frameworks will be done.

## CHAPTER 3

### THE INTELLECTUAL CAPITAL MANAGEMENT MODELS

#### 3.1 INTRODUCTION

In the previous chapter, the importance of intellectual capital management was discussed. It was established that to manage intellectual capital accurately and to derive great value from it, all its aspects need to be measured. Leading practitioners have developed intellectual capital management models to envision the intellectual capital management process and the relationships among its components (Gotcha, 1999). A good intellectual capital management model attempts to produce the information-processing capabilities afforded by new information technologies with the innovative and creative capabilities of human and social elements of the organization.

According to Malhotra (2000a) an effective intellectual capital management model is defined in the following terms: “Intellectual capital management caters to the critical issues of organizational adaptation, survival, and competence in the face of increasingly discontinuous environmental change. Essentially, it embodies organizational processes that seek synergistic combination of data and information-processing capacity of information technologies, and the creative and innovative capacity of human beings.”

Most existing methodologies for measuring intellectual capital management are motivated by research and practice in domains of accounting, economics, human resource accounting, intellectual property, and real options, among others. Most reviews of such models have focused at the firm level analysis with an accounting, economic, or strategic lens (Bontis, Dragonetti, Jacobsen & Roos, 1999, Bontis, 2000, Housel & Bell, 2001, Sveiby, 2002, Liebowitz & Suen, 2000). In this chapter a few of the attributes of intellectual capital management models will be discussed.

#### 3.2 ATTRIBUTES OF INTELLECTUAL CAPITAL MANAGEMENT MODELS

A huge variety of intellectual capital models exist, dealing with the tangible and intangible aspects of intellectual capital management. Historically, intangibles were classified as ‘goodwill’ in accounting practices. However, traditional accounting practices do not provide for the identification and measurement of the “new” intangibles in organizations. In response, the new measurement models proposed for firm level analysis attempt to synthesize the

financial and non-financial value generating aspects of the company for external reporting. The most common models for measuring intellectual capital management emphasize that non-financial measures must complement the financial measures.

Specific attributes of intellectual capital management need to be incorporated in the definition of an intellectual capital management model. As Malhotra (2000b) states in his definition, the most vital issues concerned are the types of intellectual capital that is used by the company, the intellectual capital management infrastructure that underpin the intellectual capital to bring it more efficiently and effectively to the user, and the aid of the specific intellectual capital management tool to enhance the intellectual strength of the user to make the most of the intellectual capital leveraged (Sveiby, 1997, Roos et al 1997, Stewart, 1997, Edvinsson & Sullivan, 1996, Edvinsson & Malone, 1997).

The two attributes therefore that have been identified as the most vital for contributing to successful intellectual capital management by using an intellectual capital management tool are:

- Types of intellectual capital leveraged by an intellectual capital management tool
- Characteristic of the intellectual capital management tool used.

### 3.2.1 TYPES OF INTELLECTUAL CAPITAL LEVERAGED

Many different types of intellectual capital are generated in the organization through intellectual capital management. The types of intellectual capital collected must be organized so they have a structure and relationship to the task at hand. Increases in product complexity, the move toward globalization, the emergence of virtual organizations, and the increase in focus on customer orientation all demand a more thorough and systematic approach to managing intellectual capital. Intellectual capital management is a major issue for human resource management, enterprise organization, and enterprise culture. Each different function in the organization will require different types of intellectual capital management tools that store, analyse and disseminate different types of knowledge. Most knowledge tools will leverage value through intellectual capital by concentrating on just a few of the following identified types of intellectual capital (Skyrme, 1998).

### 3.2.1.1 CUSTOMER CAPITAL

Customer capital refers to understanding customers, their needs, wants and aims and is many times classified as the most vital intellectual capital in most organizations. The understanding of customer capital is essential if a business wants to align its processes, products and services to build real customer relationships. Many companies do have knowledge of their customers, but frequently this is in a fragmented form and difficult to share or analyze and often it is incomplete (Dobney, 2004). There are two kinds of customer capital: The first type is data-derived customer capital that originates in transaction systems. Managing this kind of intellectual capital involves several aspects:

- **Strategy.** Defining what knowledge is really important and what customer behavior really counts.
- **Standards.** Ensuring that "customer" and other related terms mean the same thing throughout the organization.
- **Systems.** Allotting sufficient processing power to process all the data.
- **Statistics.** Turning data into knowledge through statistical processing.
- **Smart people.** Finding smart people to structure and interpret the analysis of customer data, regardless of what the data mining theory says.

The second type can be called human customer knowledge because it typically comes from interaction among people. It includes experiential observations, comments, lessons learned, conclusions and qualitative facts such as organization charts about the customer. This type of knowledge generally relates to business customers or high-value consumers, though sometimes it is also useful to capture human knowledge from large numbers of consumers (Davenport, 1998).

### 3.2.1.2 INTELLECTUAL CAPITAL IN PROCESSES

Companies that leverage intellectual capital in processes apply the best know-how while performing core tasks. Intellectual capital management and process automation are closely linked, but are often seen as unrelated disciplines. Companies that are organized to support cross-functional business processes learn that it is essential to share product-related and process-related intellectual capital across functional boundaries (Moore, 2003).

### 3.2.1.3 INTELLECTUAL CAPITAL IN PRODUCTS (AND SERVICES)

Smarter solutions of products and services customized to user needs are an effect when the company knows more about the products and services they deliver. Products produced by the company, functions and benefits of the products, suppliers, brochures and reference material, external products and services are included among some of the sources for this intellectual capital.

### 3.2.1.4 ORGANIZATIONAL MEMORY

Organizational memory provides a shared intellectual capital space that supports a group of people (an organization) to draw on lessons from the past or elsewhere in the organization. The intellectual capital space should be "living" in the sense that it is an evolving product of the work done by the members of the organization as opposed to simply being a static storage of intellectual capital (enTWine, 2003).

### 3.2.1.5 INTELLECTUAL CAPITAL IN RELATIONSHIPS

Intellectual capital in relationships is derived from deep personal knowledge that underpins successful collaboration. Electronic collaboration is a process through which project partners can contribute jointly to works in progress via email, groupware, public networks and other tools (Knowledgepoint, 2003).



### 3.2.1.6 INTELLECTUAL CAPITAL IN PEOPLE

Intellectual capital in people can also be classified as human capital. Nurturing and harnessing brainpower can extract the company's most precious asset.

### 3.2.1.7 KNOWLEDGE ASSETS

Several of the components of intellectual capital have already been discussed in chapter 2. Skyrme (1999) classifies the measuring and management of the company's intellectual capital as the knowledge assets. Knowledge assets are classified as all intangible assets and intellectual property of the organization. There are many different classifications of intellectual capital.

According to Edvinsson & Malone (1997), intellectual capital takes three basic forms: human capital, structural capital and customer capital as discussed in chapter 2.

Knowledge assets include a wide variety of important forms of knowledge. These are the most difficult to quantify and measure. Most knowledge management tools concentrate on the measurement of knowledge assets.

#### 3.2.1.8 INTELLECTUAL CAPITAL OF COMPETITORS

Strategies, products and key people can decide how to measure and track competitor's performance and the organization could understand the competitors for each customer by:

- Determining data sources and measurement models
- Using technology for data gathering, analysis, and use
- Associating data fields with customer relationship management databases (i.e., linking competitor data with CRM data)
- Making use of competitive intelligence
- Business Intelligence.

#### 3.2.1.9 INTELLECTUAL CAPITAL OF THE WIDER ENVIRONMENT

The wider environment includes the regulatory, legal, social, economic and technological environment and can play an important role on the success of the intellectual capital management in the organization (Skyrme, 1998).

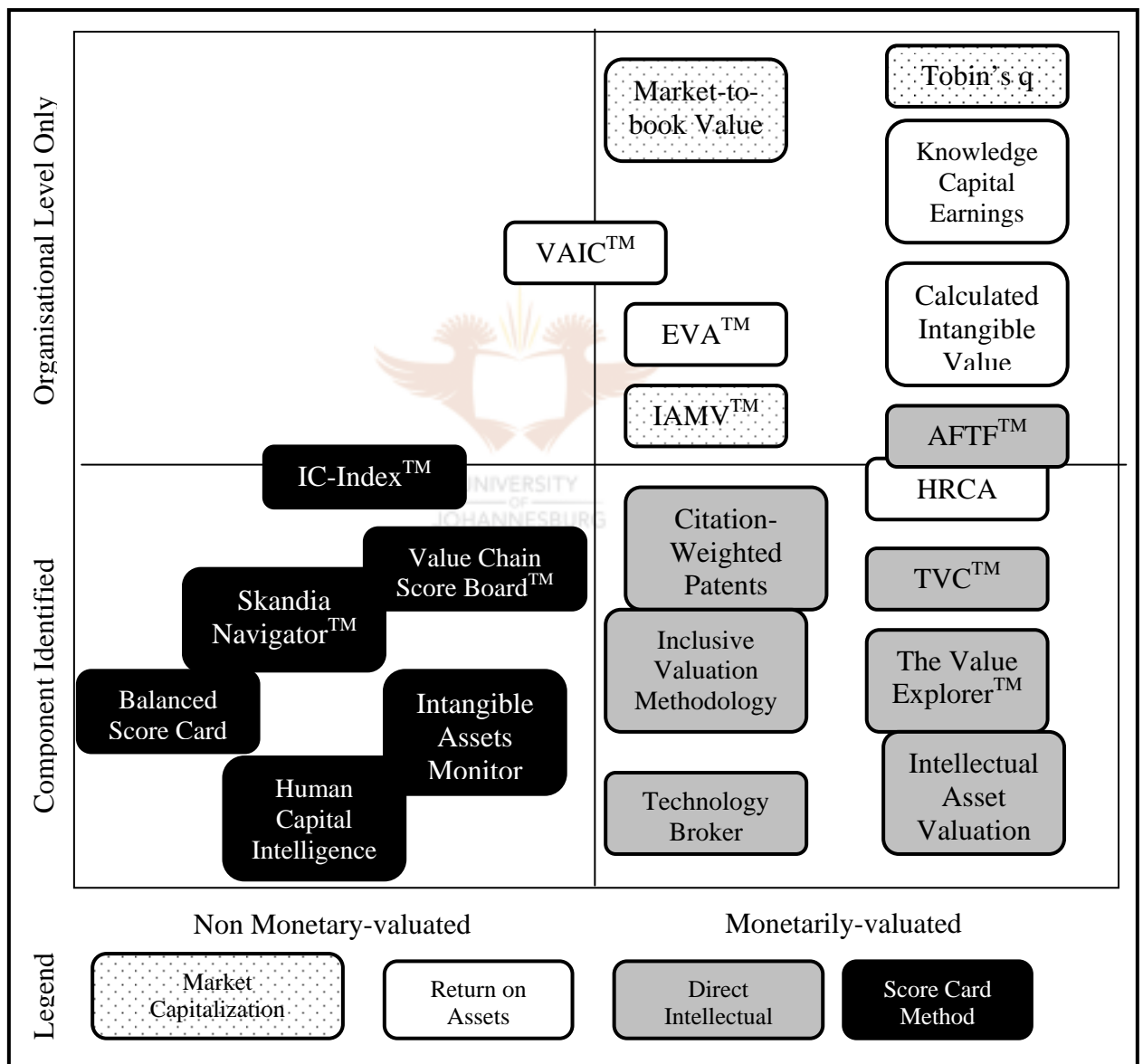
Intellectual capital encompasses more than people and, therefore, requires a more comprehensive approach. Intellectual capital is the term given to the combined intangible assets, which enable the company to function. All of the above-mentioned types of intellectual capital need to be gathered, stored, managed and extracted by knowledge workers. A very comprehensive intellectual capital management infrastructure needs to be in place to support the successful assimilation of the types of intellectual capital.

#### 3.2.2 CHARACTERISTICS OF INTELLECTUAL CAPITAL MANAGEMENT TOOLS

According to Sveiby (2002) and Malhotra (2003) there are four basic models used to classify the tools of measurement of intellectual capital management:

- Market capitalization method
- Return on assets method
- Direct intellectual capital method
- Scorecard method.

A summary of the intellectual capital management measurement models are depicted in figure 3.3. The Scorecard method is classified as non-monetary valued and is identifiable by its components. The Scorecard method tools include: Intellectual Capital Index (IC Index), Value Chain Scoreboard, Skandia Navigator, Balanced Scorecard, Intangible Asset Monitor (IAM), Human Capital Intelligence (HCI). As opposed to the scorecard method, the direct intellectual capital method is monetarily valued but is also component identified. The Direct intellectual capital method includes the following tools: Citation-weighted Patents, Inclusive Valuation Methodology, Technology Broker, Accounting for the Future (AFTF), Total Value Creation (TVC), The Value Explorer and Intellectual Asset Valuation.



**Figure 3.1 Classification of intellectual capital management models**

Source: Sveiby, 2002

The return on Assets and Market capitalization models are both monetary valued and are



measured by organization level only. The Return on Assets method tools include: Value Added Intellectual Coefficient (VAIC), Economic Value Added (EVA), Knowledge Capital Earnings, Calculated Intangible Value and Human Resource Costing & Accounting (HRCA). The Market Capitalization tools include: Market-to-book Value, Tobin's q and Investor assigned market value (IAMV) (Sveiby, 2002). All four of the models will be considered in order to establish the most effective intellectual capital management tool. A brief summary of all the tools in their various categories will be given, as well as the strengths and weaknesses of the various models.

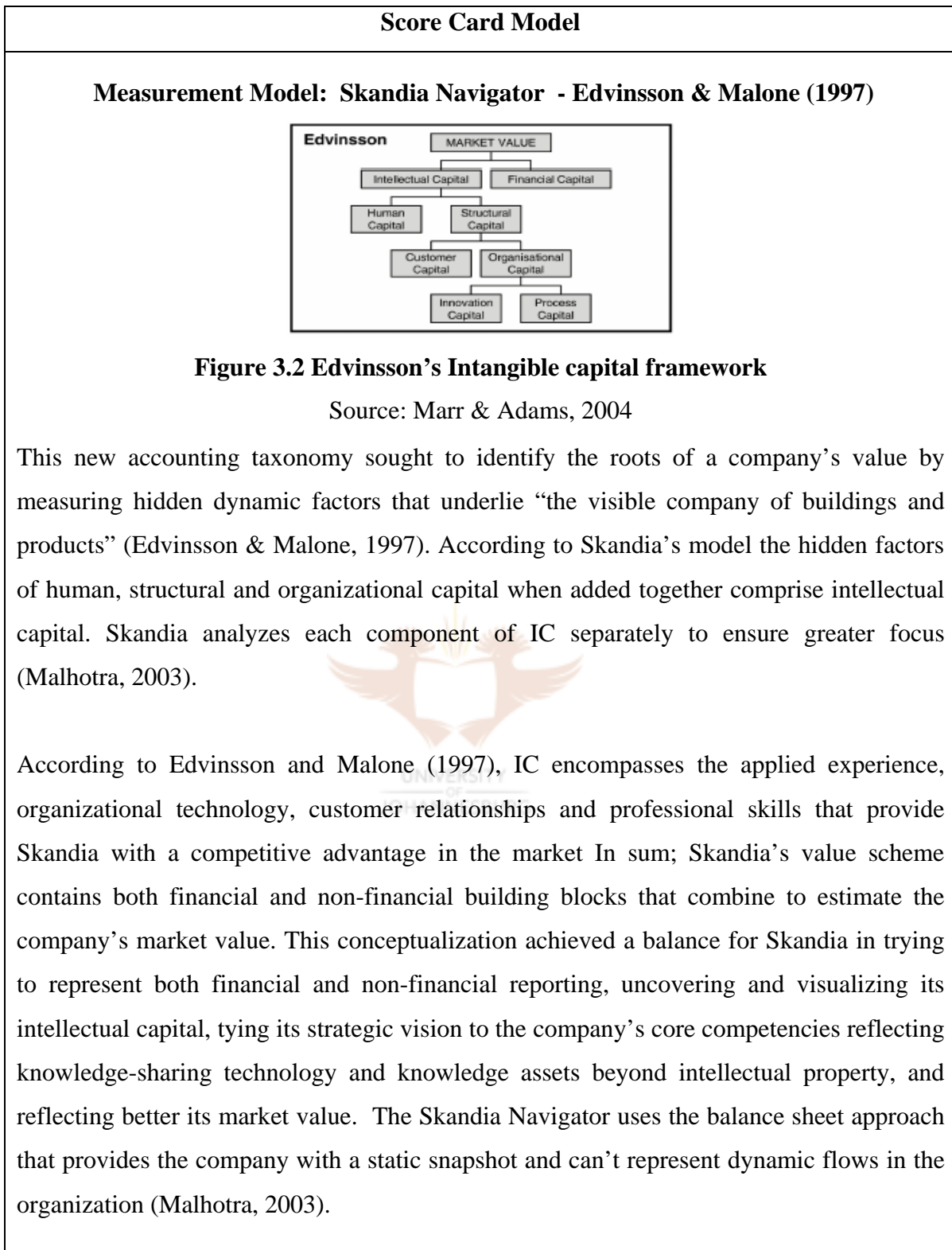
### 3.2.2.1 SCORECARD MODEL

These models are based upon scorecard models wherein various components of intangible assets or intellectual capital are identified and indicators and indices are generated and reported in scorecards or as graphs (Malhotra, 2003). Composite index based upon synthesis of all components of IC may or may not be created. No estimates are made of monetary values of intangible assets.

**STRENGTHS:** These models can provide a more comprehensive analysis of intellectual capital assets and of performance than other models based upon financial metrics. These models allow measurement closer to actual inputs, processes, and outcomes, and reporting can therefore be faster. Hence, they are particularly suitable to the task of 'detection and correction of errors' in aligning the inputs and processes with outputs and outcomes. The indicators capture contextual nuances and result in 'rich' data analyses of which can provide useful insights for policy making (Malhotra, 2003).

**WEAKNESSES:** The strengths of these measures that make them particularly effective can also be interpreted in terms of weaknesses of efficiency. Contextual influences that facilitate more corrective policy responses make comparison across different contexts somewhat challenging. Also, rich data that yield insightful observations on in-depth analysis may not be efficient in terms of quick analysis and may not easily yield a single 'standard' numeric or financial composite index (Malhotra, 2003).

Table 3.1 Scorecard Measurement Models



The Skandia IC report uses up to 91 new IC metrics plus 73 traditional metrics to measure the five areas of focus making up the Navigator model. Edvinsson & Malone (1997) acknowledge that various indices may be redundant or of varying importance. Yet in trying to use their experience to create a universal IC report, they still recommend 112 metrics. Inclusion of structural capital may provide the incorrect impression that availability of resources by itself results in competitive advantage regardless of effective utilization.

### Measurement Model: Intangible Asset Monitor - Sveiby (1997)

#### Overview of the intellectual capital model

Sveiby		
Intangible Assets		
<b>External Structure</b> (brands, customer and supplier relations)	<b>Internal Structure</b> (the organisation: management, legal structure, manual systems, attitudes, R&D, software)	<b>Individual Competence</b> (education, experience)

**Figure 3.3 Sveiby's Intangible capital framework**

Source: Marr & Adams, 2004

The Intangible Asset Monitor shares many similarities with the Skandia Navigator (Malhotra, 2003). Sveiby (1997) foresees an intangible model as clearly understood as that of an organization's book value equal to tangible assets minus visible debt. The primary emphasis is on people as they are considered as the organisation's only profit generators. People's competencies (similar to Skandia's human capital) are the key focus of the model. It then gets converted to external structures (similar to Skandia's organizational capital) and internal structures (similar to Skandia's customer capital) (Malhotra, 2003). Sveiby (1997) proposes a conceptual framework based on three families of intangible assets: external structure (brands, customer and supplier relations); internal structure (the organization: management, legal structure, manual systems, attitudes, R&D, software); and individual competence (education, experience). The Intangible Asset Monitor shares many similarities with the Skandia Navigator (Malhotra, 2003).

While efficiency of the internal structure or “operational efficiency” of an organization has historically been part of most traditional accounting measurement, the other two intangible assets in his model are not. Sveiby (1997) believes that the problem with using measures of these two assets is not that they are difficult to design; rather their outcomes seem difficult to interpret as they correlate with changes in business performance.

First, Sveiby (1997) recommends replacing the traditional accounting framework with a new framework that contains a knowledge perspective. Within this framework, he argues that both non-financial measures to measure intangible assets and financial measures to measure visible equity can be jointly used to provide a complete indication of financial success and shareholder value. According to Sveiby, the purpose of measuring these three indicators of intangible assets is to provide management control.

Internal measurement on the other hand is undertaken for management which needs to know as much as possible about the company so that it can monitor its progress and take corrective action when needed. It in fact becomes a management information system.

The central idea is to design indicators that correlate with each one of the four modes of value creation, the growth of the asset in question, the renewal rate, how efficiently it is utilized, and the risk of losing it (Sveiby, 2003).

In his conceptual model, Sveiby identifies three measurement indicators: growth and renewal (i.e., change), efficiency, and stability for each of the three intangible assets. He recommends managers select one or two variables indicative of each indicator similar to those developed in the example of his Intangible Assets Monitor model.

In essence, the Intangible Assets Monitor is “a presentation format that displays a number of relevant indicators in a simple fashion” (Sveiby, 1997:197). Sveiby lists specific indices for each of his three growth and renewal, efficiency, and stability measurement indicators used to assess each category of intangible assets of a knowledge organization.

**To measure professional competence intangible assets, the indices include:**

- growth/renewal: number of years in the profession, education level, training and education costs, grading of executives, professional turnover, competence-enhancing customers

- efficiency: proportion of professionals in the company, the leverage effect of professionals, value-added per professional
- stability: average age, seniority, relative pay position, professional turnover rate

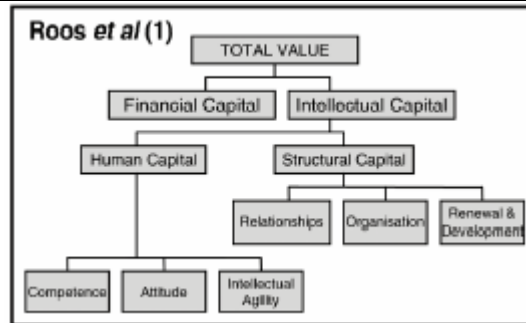
**To measure internal structure intangible assets, the indices include:**

- growth/renewal: investment in the internal structure, investment in information processing systems, customers contributing to internal structure
- efficiency: proportion of support staff, sales per support person, values and attitude measurements
- stability: age of the organization, support staff turnover, the rookie ratio

**To measure external structure intangible assets, the indices include:**

- growth/renewal: profitability per customer, organic growth
- efficiency: the satisfied customer index, win/loss index, sales per customer
- stability: proportion of big customers, age structure, devoted customers ratio, frequency of repeat orders

#### Measurement Model: IC-Index - Roos, Roos, Dragonetti & Edvinsson (1997)



**Figure 3.4 Roos et al's Intangible capital framework**

Source: Marr & Adams, 2004

The IC-Index is an example of “second generation” practices that attempt to consolidate all the different individual indicators into a single index, and to correlate the changes in intellectual capital with changes in the market (Roos, Roos, Dragonetti & Edvinsson, 1997). The four indices are Relationship capital, Human capital, Infrastructure capital and Innovation capital (Malhotra, 2003).

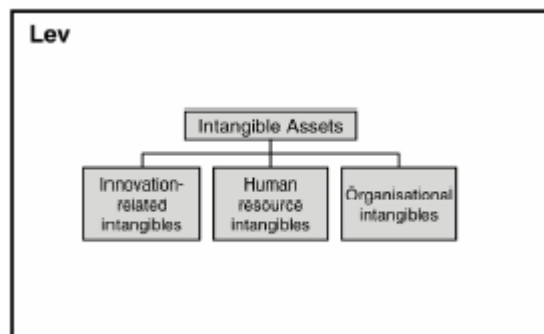
According to Roos, Roos, Dragonetti & Edvinsson, (1997), the IC-Index has several distinct features:

- it is an idiosyncratic measure
- it focuses on the monitoring of the dynamics of IC
- it is capable of taking into account performance from prior periods
- it sheds light on a company different from an external view typically based on an examination of physical assets.

An IC-Index is context specific and is therefore limited in its universality among companies, and therefore depends on value judgments. Definitions, strategic prioritizing, choice of indicators, etc. all make comparisons of any absolute IC-Index summary value calculated for different companies or over time by one company meaningless. In addition, because only proxy measures are taken of IC stock, all metrics are dimensionless, ordinal numbers (Roos et al. 1997). Bontis et al. (1999) suggest that changes in an IC-Index reflect changes in the underlying IC elements that in turn signal changes in the underlying drivers of future earnings potential. Because the IC-Index takes past performance into account (Malhotra, 2003), it is subject to “one-off special events” which can have a strong influence on moving the index up or down for some years after the event. On the other hand, the IC-Index allows managers to “finally understand the effects a particular strategy have on the IC of a company and compare two alternatives to understand which one is preferable from an IC point of view”.

### Measurement Model: Value Chain Scoreboard - Lev (2002)

#### Overview of the intellectual capital model



**Figure 3.5 Lev's Intangible capital framework**

Source: Marr & Adams, 2004

The Value Chain Scoreboard consists of a matrix of non-financial indicators (Malhotra, 2003).

There are three categories according to cycle of development:

1. Discovery / Learning
2. Implementation
3. Commercialization

### **Measurement Model: Human Capital Intelligence - Fitz-Enz (1994)**

#### **Overview of the intellectual capital model**

Sets of human capital indicators are collected and benchmarked against a database and it is similar to HRCA (Malhotra, 2003).

Source: Malhotra, 2003

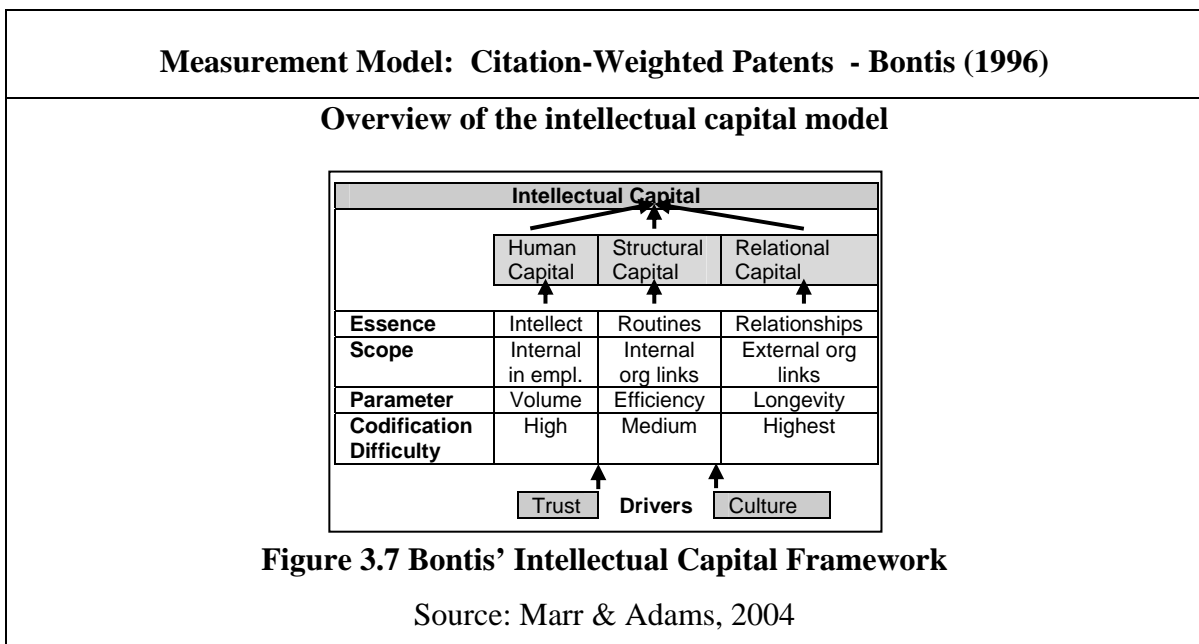
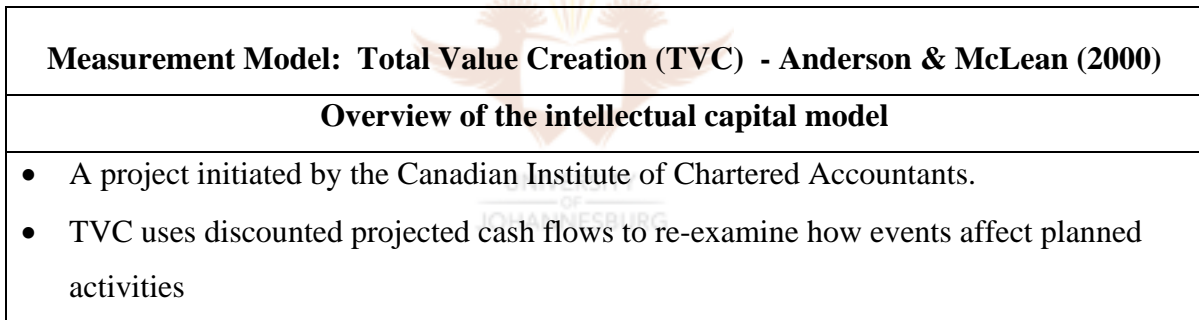
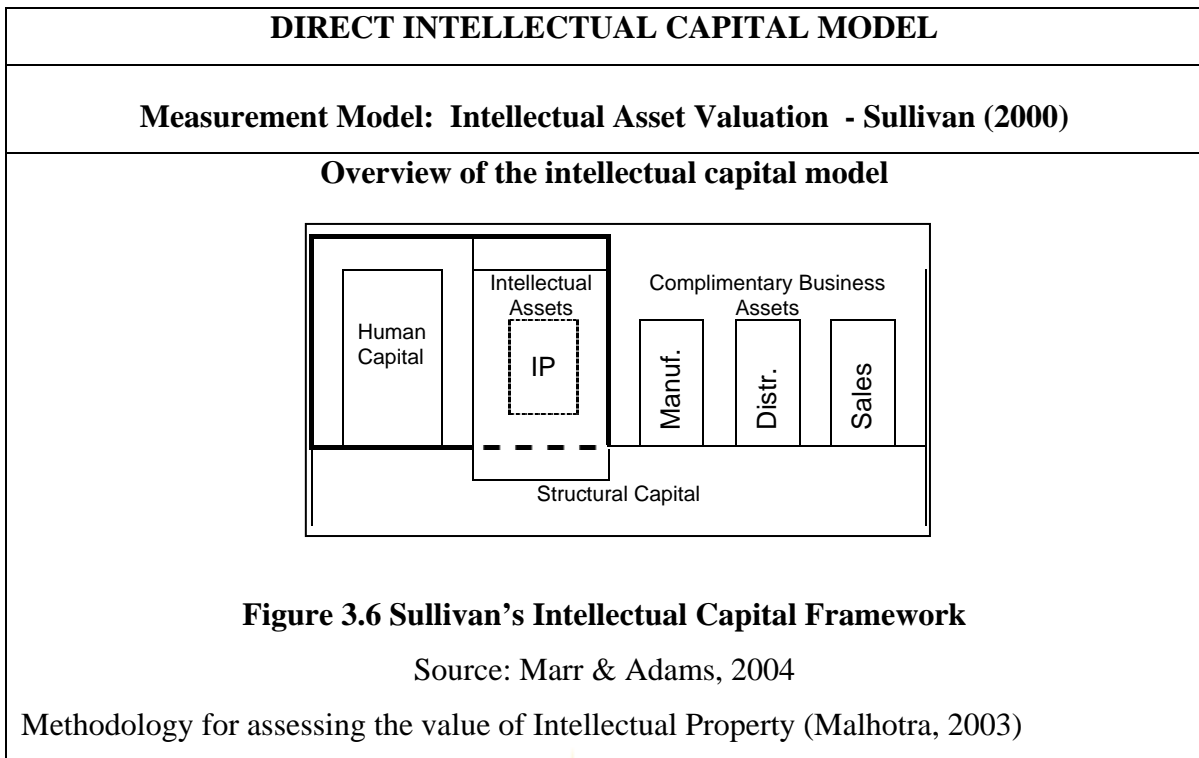
#### 3.2.3.2 DIRECT INTELLECTUAL CAPITAL MODEL

According to Malhotra (2003), these models are based on direct intellectual capital models, i.e., they estimate the monetary value of the intangible assets by identifying its various components. Some of these models have limited use for assessing and analyzing specific aspects of intellectual capital and knowledge assets. They may be used in conjunction with the scorecard models when the objective is to derive composite 'standard' financial or numeric indicators. However, such standards must be adopted with caution to ensure valid and reliable measurement and comparison.

**STRENGTHS:** These models allow valuation of separate components of intellectual capital; they allow for combinations of monetary and non-monetary valuations; they provide a comprehensive view of the organization's intellectual wealth; these are event-based measures and therefore better at relating cause and effect compared with financial metrics (Malhotra, 2003).

**WEAKNESSES:** These measures are company specific and may be difficult to compare and benchmark; given much financial and non-financial data, they involve more effort and judgment in analyses (Malhotra, 2003).

Table 3.2 Direct Intellectual Capital Models





According to Bontis (1996), Dow Chemical has been at the forefront in using patents as proxies for practical intellectual capital measurement. A technology factor is calculated based on the patents developed by an organization (Malhotra, 2003). A six-step process has been implemented for managing intellectual assets that includes:

- defining the role of knowledge in the business;
- assessing the competition's strategies and knowledge assets;
- classifying the company's portfolio of knowledge assets;
- evaluating the value of those assets to keep, develop, sell, or abandon;
- investing in areas where gaps have been found; and
- assembling the new knowledge portfolio and repeat ad infinitum.

The "patent evaluation process" is a team-based effort where members from R&D and marketing interact directly with production to decide on the viability of undertaking and/or continuing the research process. The team may review one indicator or sets of indicators for longer than a year in order to decide whether the intellectual property is valuable. It also triggers management action to investigate whether the intellectual property might have value for someone else i.e. sell the idea, or whether it should be abandoned and written off, like other unproductive assets. Dow started with patents as an obvious and important example of intellectual assets in order to make IC visible to the organization. Patents can be readily understood to be indicators of intellectual property. Traditional accounting methods assign value to patents, but only in terms of the cost to obtain the patent, and not the cost of the R&D leading to the patent, nor the potential for marketability if put into production, nor any legal considerations about the patent.

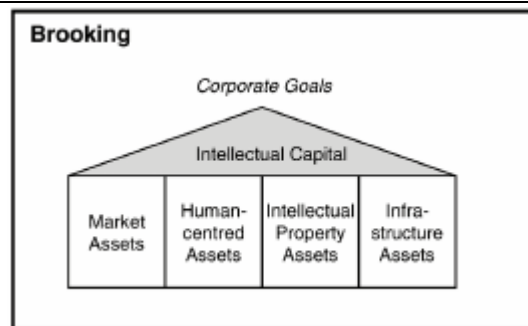
**Measurement Model: Accounting for the future (AFTF) - Nash (1998)**

**Overview of the intellectual capital model**

- A system of projected discount cash flows.
- The difference between AFTF value at the end and the beginning of the period is the value added during the period

**Measurement Model: Technology Broker - Brooking (1996)**

**Overview of the intellectual capital model**



**Figure 3.8 Brookings' Intellectual Capital Framework**

Source: Marr & Adams, 2004

Brooking (1996) defines IC as the combined mixture of the following four components: market assets, human centered assets, intellectual property assets and infrastructure assets. Brooking (1996) begins the diagnostic process by having the organization answer twenty questions that make up the IC indicator. The results of this test suggest that the less a company is able to answer in the affirmative to the 20 questions, the more it needs to focus on strengthening its intellectual capital. Each component of Brooking's IC model is then examined via a number of specific audit questionnaires that ask questions specific to those variables thought to contribute to that asset category.

In total, the Technology Broker Intellectual Capital Audit comprises 178 questions.

Once an organization completes its IC Technology Broker audit, Brooking (1996) offers three methods to calculate a dollar value for the intellectual capital identified by the audit:

- the cost approach, which is based on assessment of replacement cost of the asset;
- the market approach, which uses market comparables to assess value; and
- the income approach, which assesses the income-producing capability of the asset (i.e., the NPV of its net cash benefits).

The Technology Broker approach has been acclaimed for offering a toolbox for organizations to assign value to intellectual capital. Lynn (1998) suggests that Brooking has created an intellectual capital audit that itself represents an intellectual asset for organizations. Moreover, her active marketing of the instrument and its conceptual basis has served to help others identify, value, and leverage the intellectual capital in their organizations.

The Technology Broker approach has been acclaimed for offering a toolbox for organizations to assign value to intellectual capital. Lynn (1998) suggests that Brooking has created an intellectual capital audit that itself represents an intellectual asset for organizations. Moreover, her active marketing of the instrument and its conceptual basis has served to help others identify, value, and leverage the intellectual capital in their organizations.

The main weakness in these items is that there is a considerable leap that must be made from the qualitative results of the questionnaire to actual dollar values for these assets.

There are also many similarities between the Technology Broker IC audit questions, which are subjective in nature, and Skandia's intellectual capital measures, which are objective in measure (Malhotra, 2003), Intellectual capital, 'dream ticket', audit, index, target, and measures (Brooking, Board & Jones, 1997)

### **Measurement Model: Inclusive Valuation Methodology (IVM) - McPherson (1998)**

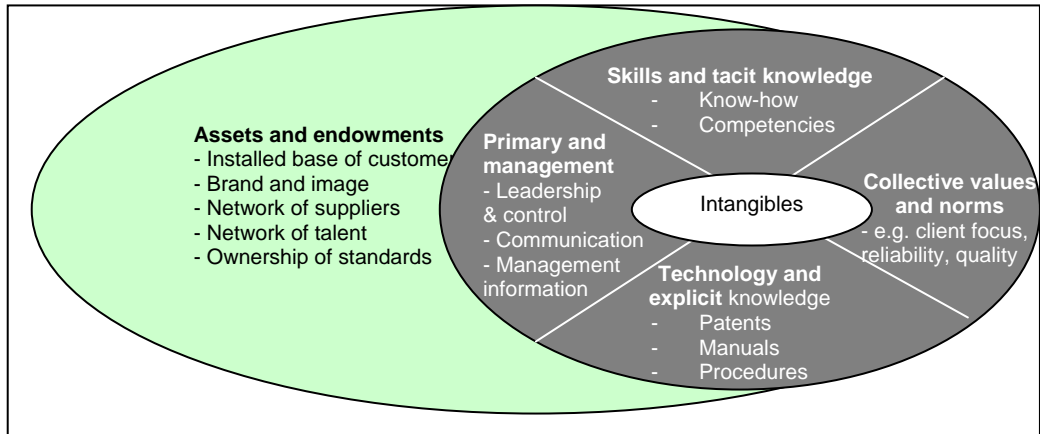
#### **Overview of the intellectual capital model**

Shows relationship between the company value, intellectual capital, and monetary measurements to provide an inclusive business valuation.

- Uses three value categories:
  1. Intrinsic value representing the internal effectiveness of the company
  2. Extrinsic value measured by the delivery effectiveness of the company
  3. Instrumental value that reflects impacts on the competitive environment.
- Attempts to provide an overall business value as reflected by the sum of intellectual capital and company's cash flows.
- Combined Value Added = Monetary Value Added combined with intangible Value Added.

### Measurement Model: The Value Explorer - Andriessen & Tissen (2000)

#### Overview of the intellectual capital model



**Figure 3.9 Andriessen & Tissen's Intangible capital framework**

Source: Marr & Adams, 2004

- Accounting methodology proposed by KMPG for estimating the value of intellectual capital attributable to a company's core competencies
- Based on allocation of value to following intangibles:
  1. Assets and endowments
  2. Skills & tacit knowledge
  3. Collective values and norms
  4. Technology and explicit knowledge
  5. Primary and management processes.

Source: Malhotra, 2003

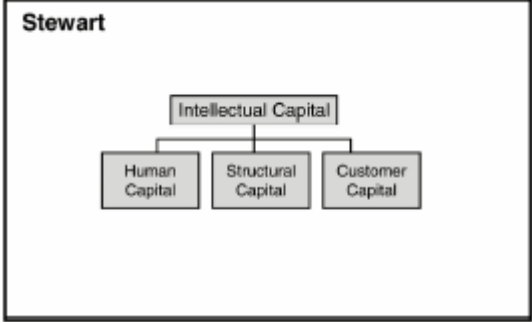
#### 3.2.3.3 MARKET CAPITALISATION MODEL

These models are based upon market capitalization i.e., they compute the intellectual capital as the difference between the firm's market capitalization and stockholder equity. These are not of much relevance for intellectual capital assessment (Malhotra, 2003).

**STRENGTHS:** Good for illustrating the financial value of intellectual capital; Good for inter-firm benchmarking within an industry (Malhotra, 2003).

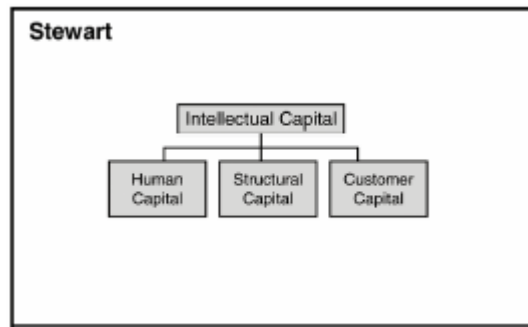
**WEAKNESSES:** Do not contain information about the components contributing to intellectual capital; Exclusive monetary focus provides only partial perspective; Not suitable for the holistic socio-economic and human development approaches often sought by a company (Malhotra, 2003).

Table 3.3 Market Capitalization Measurement Models

<b>MARKET CAPITALISATION MODEL</b>
<b>Measurement Model: Tobin's q - Stewart (1997)</b>
<p><b>Overview of the intellectual capital model</b></p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;"> <p style="text-align: center;"><b>Stewart</b></p>  <pre> graph TD     IC[Intellectual Capital] --&gt; HC[Human Capital]     IC --&gt; SC[Structural Capital]     IC --&gt; CC[Customer Capital] </pre> </div> <p style="text-align: center;"><b>Figure 3.10 Stewart's Intangible capital framework</b></p> <p style="text-align: center;">Source: Marr &amp; Adams, 2004</p> <ul style="list-style-type: none"> <li>• Similar to market-to-book value except it substitutes book value with replacement cost of tangible assets</li> <li>• A company with Tobin's q greater than 1 and greater than competitor's q is presumed to produce higher profits resulting from advantage that is attributed to intellectual capital</li> <li>• This procedure neutralizes many of the difficulties with the market-to-book ratio. (Brooking, 1996)</li> </ul>
<b>Measurement Model: Investor assigned market value (IAMV) - Standfield (1998)</b>
<b>Overview of the intellectual capital model</b>
<ul style="list-style-type: none"> <li>• Takes the company's true value to be its stock market value and divides it with tangible capital + (realized intellectual capital + intellectual capital erosion + sustainable competitive advantage).</li> </ul>

### Measurement Model: Market-to-Book Value (MVA) - Stewart (1997)

#### Overview of the intellectual capital model



**Figure 3.11 Stewart's Intangible capital framework**

Source: Marr & Adams, 2004

MVA represents the spread between the cash that a firm's investors have put into the business since the start up of the company and the present value of the cash that they could get out of it by selling their shares. By maximizing this spread, corporate managers maximize the wealth of the company's shareholders relative to other uses of capital (Bontis et al., 1999).

According to Bontis et al. (1999:395), MVA can represent the market's assessment of the net present value of a company's current and contemplated capital investment projects. As such, MVA is a "significant summary assessment of corporate performance". The key premise is that the market value represents the true value of the company including both tangible assets and intellectual capital (Malhotra, 2003). However, a key disadvantage with MVA is that gains and losses accruing from historic activities are aggregated on a one-to-one basis with last year's results plus today's moods as they are shown in market price. As a result, a company with a successful history will keep on showing positive and high MVA even when current or future prospects are bleak and unrewarding. This is a generally accepted method in accounting and easy to apply (Malhotra, 2003).

Source: Malhotra, 2003

#### 3.2.3.4 RETURN ON ASSETS MODEL

According to Malhotra (2003), these measurement models are based upon return on assets (ROA). ROA is computed by dividing the pre-tax earnings of the firm by the average tangible assets and then comparing with the industry average. The difference is then multiplied by the company's average tangible assets to calculate an average annual earning

from the intangibles. Dividing this average earning by the company's average cost of capital or an interest rate gives the value of a company's intellectual capital.

These models are not of much relevance for intellectual capital and knowledge assets assessment.

**STRENGTHS:** Good for industry benchmarking and for illustrating financial value of intellectual capital; built on traditional accounting rules and thereby easily communicated between accountants (Malhotra, 2003).

**WEAKNESSES:** Do not contain information about the components contributing to intellectual capital; Exclusive monetary focus provides only partial perspective; Not suitable for the holistic socio-economic and human development approaches often sought by companies (Malhotra, 2003).

Table 3.4 Return on Assets Measurement Models

<b>RETURN ON ASSETS MODEL</b>
<b>Measurement Model: Economic Value Added (EVA) - Stewart (1997)</b>
<b>Overview of the intellectual capital model</b>
<p>Economic Value Added (EVA<sup>TM</sup>) was introduced by Stewart (1997) as a comprehensive performance measure that uses the variables of capital budgeting, financial planning, goal setting, performance measurement, shareholder communication, and incentive compensation to account properly for all the ways in which corporate value can be added or lost (Bontis, Dragonetti, Jacobsen and Roos, 1999). According to Strassman (1999), economic value added is the net result of all managerial activities. EVA is intended to offer improvements to the market value added (MVA<sup>TM</sup>) calculation. To have a positive EVA, a company's rate of return on capital must exceed its required rate of return.</p> <p>Bontis et al. (1999:395) define EVA as "the difference between net sales and the sum of operating expenses, taxes and capital charges where capital charges are calculated as the weighted average cost of capital multiplied by the total capital invested. In practice, EVA is increased if the weighted average cost of capital is less than the return on net assets, and vice versa." Its equation is given below:</p>

Net sales - operating expenses - taxes - capital charges = EVA Some writers have suggested that EVA can be used as a surrogate measure for the stock of intellectual capital if it can be assumed that effective management of knowledge assets increases EVA (Malhotra, 2003).

Yet in terms of its use as a surrogate measure of intellectual capital, Bontis et al (1999) note that if EVA is used, it implies that no specific measures of intangible assets are needed. Moreover, managers are no better off understanding exactly what the company's intangible resources or their specific contribution are. Such a "black box" approach to accounting blocks any real effort to validate the value of or manage a company's intellectual capital. Strassman (1999:4) believes that "if EVA is the interest earned from an accumulation of knowledge residing within the firm, then the value of this principal can be calculated by dividing the EVA by the price one pays for such capital".

Three other limitations in the calculations used to create EVA include: i) the use of book assets relies on historical costs which give little indication of current market or replacement value; ii) empirical research has not shown conclusively that EVA is a better forecaster of stock price or its variation; and iii) the starting point for EVA analysis assumes that companies should be run in the interest of shareholders exclusively. In sum, the EVA performance measure may not be appropriate when applied to quantifying the value of intangible assets.

**Measurement Model: Human Resource Costing & Accounting (HRCA) - Johansson (1998) (Johansson, Eklov, Homgren and Martensson, 1998)**

**Overview of the intellectual capital model**

- Calculates the hidden impact of Human Resource related costs that reduce a firm's profits
- Adjustments are made to the Profit & Loss account.
- Intellectual capital is measured by calculation of the contribution of human assets held by the company divided by capitalized salary expenditures (Johansson, Eklov, Homgren and Martensson, 1998).



<b>Measurement Model: Calculated Intangible Value - Stewart (1997)</b>
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<b>Overview of the intellectual capital model</b>
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- |  |
|--|
| <ul style="list-style-type: none"> <li>• Calculates the excess return on hard assets</li> <li>• Then uses this figure as a basis for determining the proportion of return attributable to intangible assets</li> <li>• May be used as an indicator of profitability of the investments in knowledge assets.</li> </ul> |
|--|

<b>Measurement Model: Knowledge Capital Earnings - Lev (1999)</b>
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<b>Overview of the intellectual capital model</b>
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- |   |
|---|
| <ul style="list-style-type: none"> <li>• Knowledge Capital Earnings are calculated as the portion of normalized earnings over and above expected earnings attributable to book assets.</li> </ul> |
|---|

<b>Measurement Model: Value Added Intellectual Coefficient (VAIC) - Pulic (1997)</b>
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<b>Overview of the intellectual capital model</b>
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- |  |
|--|
| <ul style="list-style-type: none"> <li>• Measures how much and how efficiently intellectual capital and capital employed create value based on the relationship to three major components:             <ol style="list-style-type: none"> <li>1. Capital employed</li> <li>2. Human capital</li> <li>3. Structural capital.</li> </ol> </li> </ul> |
|--|

Source: Malhotra, 2003

None of these approaches produces a list of intangible assets with monetary values assigned to each, the total of which accounts for the difference between market capitalization and tangible asset value. However over a series of reports, they do produce some indication of a company's ability to turn intellectual capital into financial capital and an indication of what the company's directors consider important to achieve. They also produce a set of performance measures that influence behaviour inside the organization. "What gets measured gets managed" and so management attention is not exclusively focused on operational/financial results to the detriment of innovation, exploiting patents, customer relationships, employee morale and process development.

However, all intellectual capital management tools have their strengths and weaknesses. Firstly it is possible to introduce distortions into measurements by changing definitions, using imprecise or ‘misinterpretable’ language. The definitions above are highly subject to personal interpretation and can be understood in different (but similar) ways. Secondly, intellectual capital management tools acquire a life of their own and create much work whether they are useful or not; it becomes impossible to question their value or alter their content. Finally, many systems measure whatever is easy to measure rather than what is relevant performance. In addition to these difficulties of measurement, the individuals compiling the systems and the context in which they do so will be important. Whether the results will be used by investors or managers and whether it will be for a specific reason or for general purposes will influence which measures are selected and how relatively important they are (The Institution of Electrical Engineers, 2004)

### 3.3 WHICH METHOD TO USE

Sveiby (2002) created a comparison of the various models based on which method will be an effective tool to use to measure certain aspects of intellectual capital in the organization. There are five main purposes that these tools are used for: Monitoring of performance, acquiring or selling of the business, reporting to stakeholders, guide investment and uncovering of hidden value. Table 3.5 summarizes which method can be used for what purpose as well as a recommendation of which models will be less effective to use for these purposes.

Table 3.5 Comparison of models based on specific purposes

<b>CRITERIA</b>	<b>EFFECTIVE</b>	<b>LESS EFFECTIVE</b>
<b>Monitor Performance (Control)</b>	Scorecard Models	Market Valuation Models
<b>Acquire / Sell Business (Valuation)</b>	Return on Assets Models	Scorecard Models
<b>Report to Stakeholders (Justification)</b>	Scorecard & Return on Assets Models	Market Valuation Models
<b>Guide Investment (Decision)</b>	Return on Assets Models	Scorecard & Direct IC Models
<b>Uncover Hidden Value (Learning)</b>	Scorecard & Direct IC Models	Market Valuation & Return on Assets Models

Source: Sveiby, 2002

The Scorecard models have a variety of good characteristics that will aid decision making in a major organization. Scorecard models are effective to monitor performance (control), report to stakeholders (justification), and uncover hidden value (learning). The purposes that scorecard models do not support is acquiring or selling business (valuation or to guide investment (decision). The return on asset models are almost as effective as the scorecard models and are good at supporting the following purposes: acquiring or selling of the business (valuation), report to stakeholders (justification) and guide investment (decision). The fact that the return on assets method is only at organizational level, makes it a less effective decision making tool than the scorecard models which are component identified, and permit more versatility. The direct intellectual capital method is only suggested to be effective for learning and the market valuation method is generally not used to measure any of the above purposes. Therefore it can be concluded that the scorecard method would be the most effective intellectual capital management measurement model to aid decision making at organizational level.

In table 3.6 a brief comparison of some of the Scorecard method Intangible Asset Models is given. In this comparison two of the three characteristics of a good intellectual capital management model can be derived: types of tools as well as types of intellectual capital leveraged. It is important to note that the intangible assets support the tangible assets consisting of the Financial Perspective.

Table 3.6 Comparison of Scorecard Method Intangible Asset Models

Proponent	Tangible Assets Bal. Sheet	Intangible Assets			
		Invisible Balance Sheet			
Balanced Scorecard Kaplan & Norton (1992)	Financial Perspective	Internal Process Perspective		Customer Perspective	Learning & Growth Perspective
Intangible Assets Monitor (IAM) Sveiby (1997)	Visible Equity	Intangible Assets			
		Internal Structure	External Structure		Individual Competence

Skandia Navigator Edvinsson (1997)	Financial Capital	Intellectual Capital				
		Structural Capital			Customer Capital	
		Organizational Capital				
		Process Capital	Innovation Capital			
IC-Index Roos, Roos, Dragonetti and Edvinsson (1997)		Infrastructure Capital	Innovation Capital	Relationship Capital	Human Capital	
Value Chain Score Board Lev (2002)		Implementa- tion	Discovery / Learning	Commer- cialization		
Human Capital Intelligence Fitz-Enz (1994)					Human Capital	

Source: Tay, 2003

From the above comparison it can be distinguished which Scorecard model focuses more on which aspect of intellectual capital management. The Value Chain Score Board and Human Capital Intelligence Models seem to be the least comprehensive in their focus on intellectual capital and extent of measures. The IC index and Intangible Assets Monitor is usable for decision making purposes but is not as widely recommended and implemented by big organizations. The most implemented, tested and used Scorecard models are the Skandia Navigator as well as the Balanced Scorecard. Both of these Scorecard models have their strengths and weaknesses, their similarities as well as their differences. The Skandia Navigator is a very comprehensive tool, but from the above comparison, it seems as if the Human Capital perspective in the Intellectual Capital equation deserves less attention than the other perspectives. They are mostly focused on financial capital and structural capital (which consist of process and innovation capital, also called organizational capital and customer capital.)

The Balanced Scorecard is more balanced in the respect that it consists of the four perspectives called Financial, Internal process, Customer and Learning & Growth perspectives.

These perspectives are relatively comprehensive and include all the elements of intellectual capital. It focuses on external as well as internal knowledge of the organization. The types of intellectual capital it focuses on include Organizational capital (Knowledge in processes, knowledge in products and services), Customer Capital (knowledge of customers and relationships) and Human capital (knowledge of people), Financial Capital (organizational memory).

### 3.4 CONCLUSION

The earliest intangible assets tool was the Balanced Scorecard of Kaplan and Norton in 1992. Since then intellectual capital management tools have evolved, yet the same basic principles remained. Many different types of intellectual capital are accumulated in the intellectual capital management tools. Depending on the purpose of the tool, different emphasis is put on various types of intellectual capital. However, the main types of intellectual capital focused on are the category of intellectual capital assets and more specifically intellectual capital consisting of market assets, intellectual property assets, human-centered assets and infrastructure assets. A combination of all of these assets is important to get a holistic approach for managing intellectual capital in an organization.

With the idea in mind of exploring the implementation of an intellectual capital management tool in a retail company in South Africa, the retail environment of South Africa will be discussed in Chapter 4.

## CHAPTER 4

### THE RETAIL COMPANY IN SOUTH AFRICA

#### 4.1 INTRODUCTION

In Chapter 3 the various frameworks of intellectual capital management was discussed. All industries have various requirements for the measurement of intellectual capital. In order to understand how intellectual capital management models can be used in the retail industry it is important to understand the characteristics of a retail company. In this chapter, the general characteristics of a retail company in South Africa will be examined.

Retailing in South Africa is evolving into an extremely dynamic industry, driven by changes in technology, a shift in consumer shopping behaviour, saturating markets, heightened competitive forces and globalisation. The immediate retail market in South Africa has outperformed its global counterparts, aided primarily by favourable economic factors, buoyant consumer confidence and the benefits of a competitive currency. The future challenge for the South African retail sector will be to drive profitable growth in an increasingly competitive market (Wilson, 2003). Traditionally, the only intangible assets recognised in financial reporting statements were intellectual property, such as patents and trademarks, and acquired items such as goodwill. Value can be generated by intangibles not always reflected in financial statements. Particularly in the retail industry, if companies want to be forward-looking they will have to realise that intangibles comprise an integral part, to fully understand the performance of their business. In the past, it was proven that companies that could utilize and cultivate the intellectual capital embedded in the organisation would be able to keep ahead of the competition. The gains of investing in intellectual capital are the reduction of cost of capital, share price stability and a reduction of risk.

#### 4.2 THE RETAIL INDUSTRY IN SOUTH AFRICA

South Africa's services-providing industries have increased their share in the total economy significantly over the past fifty years or so. This reflects the increasing sophistication of the South African economy, but other factors, such as the end to economic isolation and the repeal of sanctions in the early 1990's, trade liberalisation, globalisation and the associated technological progress, also contributed to the growing importance of the services industries (Wagner, 2003).

After the contribution of the retail-trade sector to the total economy had remained constant at a level of about 4 percent from the 1950s to the 1980s, this contribution declined to 3 percent in 1998 and remained at around that level until 2002. The share of the overall commerce sector (i.e. the wholesale, retail and motor-trade, and catering and accommodation sectors) in the total economy declined somewhat from the 1950s to the 1980s, before increasing during the 1990s. The declining share of the traditional retail-trade sector relative to total gross value added reflects a change in consumers' buying behaviour in the second half of the 1990s. Among other things, this is evident in a shift away from traditional retail goods to new products and services. Also, a growing portion of final consumption expenditure by households was directed to wholesalers (establishments of which sales to final consumers constitute less than half of their turnover and this reduced the gross value added by the retail-trade sector) (Wagner, 2003).

The real value added by the retail-trade sector contracted at an average annualised rate of 4 percent from the second quarter of 1997 to the fourth quarter of 1998. Global economic conditions, particularly the financial turbulence in south-east Asia in 1997 and 1998, adversely affected South Africa and other emerging-market economies. The domestic financial securities markets experienced severe downward pressure in May 1998. The domestic monetary policy stance was tightened and the prime lending rate of the banks rose from 18,5 percent in May 1998 to 25,5 percent in August 1998. Business and consumer confidence deteriorated quite severely in 1998 (Wagner, 2003).

As the slack in the economy became more pronounced, households' disposable income was adversely affected by declining employment, high debt-to-income ratios and high debt-servicing costs. There was also a sharp increase in the tax burden of households from about 11 ½ percent of current income in 1990 to more than 15 ½ percent in 1999. Wealth effects following the decline in equity values in the second half of 1998 also weighed on households' willingness to spend. All these factors contributed to slower growth in consumer demand, curbing the growth in the real value added by the retail-trade sector (Wagner, 2003).

The South African economy recovered robustly from the setbacks suffered during the financial crises of 1997 and 1998. From the beginning of 1999 to 2002 the real value added by the retail-trade sector increased at an average annualised rate of 4 ½ percent, faster than the increase of 3 ½ percent in the broad commerce sector and the 3 percent in the economy as a whole. Activity in the retail-trade sector benefited from solid customer demand, following strong growth in the real disposable income of households (Wagner, 2003).

The real disposable income of households from 1999 to 2002 was boosted by, among other things,

- The consistent lowering of the tax burden of households from 15 ½ percent of current income in 1999 to 13 ½ percent 2002;
- An increase in the net property income of households as the declining interest rates lowered debt-servicing costs; and
- Increases in nominal labour compensation in excess of increases in the prices of consumer goods and services.

An analysis of the composition of final consumption expenditure shows a distinct shift in expenditure patterns away from those goods and services traditionally supplied by retailers. Expenditure on these goods and services (essentially consumer goods) increased at an average annualised rate of 2 ½ percent during the period 1999 to 2002, compared with an increase of 3 percent in total household consumption expenditure (Wagner, 2003).

In part, this was a reflection of the faster pace of price increases in spending categories that are considered essential by households. It is estimated that increases in the prices of petrol, medical products and services, transport services, household fuel and power and educational services diverted spending of some R17 billion away from traditional retail goods in the period 1999 to 2002. The popularity of cellular telephones and Internet services, together with a strong rise in outlays by households to secure property and living conditions, contributed further to this apparent structural shift in spending habits (Wagner, 2003).

#### 4.2.1 DEFINITION OF THE RETAIL INDUSTRY

Intricate processes are involved to maintain the progress and working of this industry to customers, to keep them satisfied. As indicated in the above section, this is a very volatile industry to trade in, and change is the only constant. In essence the retail industry includes the resale (sale without transformation) of new and used goods and products to the public for household use.

BitPipe (2005) describes the retail sector to be “comprised of establishments engaged in retailing merchandise and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public.”



The establishments that are part of the retail industry are butchers, general dealers, bottle stores, dealers in clothing, footwear and textiles, dealers in furniture and household requisites, bookstores and stationers, jewelers, chemists, dealers in miscellaneous goods, and repairers of personal and household goods. These establishments require huge amounts of skill, and knowledgeable and well trained individuals to market, sell and advise customers about their products and services. The management of the knowledge and information rooted in merchandise and products is vital for the effective rendering of services such as: supply chain management, delivery, installation, instructions. It is also crucial for these establishments to build up stable relationships with suppliers and wholesalers and the general public which are the clients they service. The retail organization faces tremendous challenges to survive in the retail industry.

#### 4.2.2 DEFINITION OF A RETAIL ORGANISATION

A retailer is defined as an organisation deriving more than 50 percent of its turnover from sales of goods to the public for household use.

Categories of Retail:

- Non-Durables (food, beverages, petrol, electricity, washing material, personal care, reading matter)
- Services (rent, municipal services, medical care, education, short term insurance, entertainment, communication, domestic workers, lotto / gambling, holidays, funerals).
- Durables (vehicles, furniture, appliances, household equipment, cell phones).
- Semi Durables (clothing, footwear, accessories, linen, curtains).

These categories form an important sector of the South African economy.

#### 4.2.3 RETAIL INDUSTRY IN SOUTH AFRICA

In the light of the history of the South African economy and specifically the retail sector as mentioned in paragraph 4.2.1, 2004 was a record year for most retailers, in terms of volumes of goods sold, earnings and dividend growth and reaching new share price highs (Gilmour, 2005:85).

#### 4.2.3.1 THE RETAIL SECTOR IN SOUTH AFRICA

In South Africa there are two parts to the overall retailers sector: general retailers, characterized by durable and semidurable retailers such as Edcon, Ellerines, Truworths, JD Group, Foschini and Massmart; and food & drug retailers, typified by Pick 'n Pay, Shoprite and Spar.

As indicated in Table 4.1 the top-five retailers were ranked by net profit for last year. Both JD Group and Edcon outperformed 2004's most profitable retailer, Massmart which is currently in third place. Woolworths Holdings was ranked fourth, and Foschini was ranked as number five (Gilmour, 2005:85).

Table 4.1 Top five general retailers, food & drug retailers.

Ranked by Net profit	Name	Net profit Rm	Total assets Rm	Market cap April 2005 Rm	Equity funds Rm
1	JD Group	1 052,3	7 337,0	10 906,3	3 970,0
2	Edcon	779,4	5 041,7	13 682,5	2 448,0
3	Massmart	678,7	6 594,2	8 744,5	1 026,5
4	Woolworths Holdings	670,5	5 655,3	8 383,1	2 747,3
5	Foschini	522,2	3 784,9	8 576,2	2 270,2

Source: (Gilmour, 2005:85)

As was expected, consolidation happened in this sector as retailers continued to struggle in difficult trading conditions. During the course of 2003, the South African Competition Tribunal relented on a previous decision and allowed two of the market's leaders to merge in an effort to preserve thousands of jobs (Wilson, 2003). JD Group acquired Profurn in 2003 and absorbed it relatively quickly. This acquisition helped consolidate the furniture retailing industry generally and the Ellerine/Relyant merger, which has been ratified in 2005 by the competition tribunal, will aid this process (Gilmour, 2005:85).

Two new listings on the Johannesburg stock exchange occurred in the sectors last year, Lewis Group in general retailers and Spar in food & drug. Both companies had been identified over many years by analysts as candidates for a listing. Lewis is an old Cape-based furniture retailer with a formidable reputation. It still has the highest profit margin of any listed

furniture retailer. The timing for the listing was excellent and they have enjoyed relatively buoyant share prices since listing (Gilmour, 2005:85).

As disposable income increases, more is spent on clothing and furniture (Gilmour, 2005:85). Historically, around 90 percent of purchases in this sector has been on hire purchase, stretching balance sheets to breaking point. Though the upper end has been thriving as a result of the strong Rand, and lower interest rates and tax cuts, the lower end of the market has been struggling, as these factors hardly affect it.

The South African Population is estimated to be around 45 million people. Although KwaZulu Natal is the most populous province of South Africa's 9 provinces, it is not proportionate to retail sales. The spending power of South African customers resides mostly in the Western Cape and Gauteng, where the retail figures outweigh the population percentages. Cape Town and Johannesburg are the country's biggest money spinners in terms of business, trade and industry and it is estimated that 50 percent of retail sales occur in the Western Cape and Gauteng.

Another demographic fact of South Africa is that 53 percent of the population is younger than 24 years old. This implies that the bulk of the population is not responsible for shopping, but that the younger generation may influence consumer spending (FMCG Direct, 2004).

Retailers have been expanding into new business areas in search of new avenues for growth, complimenting existing products and leveraging off an existing customer base by means of diversification. In many instances, loyalty programmes and retail data provide the retailer with valuable information about the financial position and shopping/payment habits of their customer base. Retailers now offer the market Financial Services products in the form of banking facilities, loan accounts, unit trusts and a variety of insurance policies.

The eCommerce market is not a large sector, and most probably never will be (in relation to the traditional retail sector), due to the large disparities in the market. However, retailers have entered this market, either as sole online retailers or, for brick & mortar stores, to protect their market share, and own the customer relationship. Retailers are aware that this is the only instance where they communicate and interact one-on-one with the customer, making it a potentially valuable point of contact (Wilson, 2003).

#### 4.2.3.2 THE FUTURE OF THE RETAIL SECTOR IN SOUTH AFRICA

What happens in the future of the retail sector in South Africa depends on whether what is happening in consumer spending is a result of a structural change in spending or merely cyclical. Considering the substantial change in the demographic composition of consumer spending in the past 10 years, it's probably safe to assume that a structural shift has occurred. The emergence of an aspirational black middle class has altered the consumer spending landscape fundamentally (Wilson, 2003).

Following the 50 bases point cut in short-term rates in 2005, the interest rate cycle may have bottomed and further growth in the sector will be predicated on a broader-based improvement in the economy. If economists are correct in their assumption that interest rates have probably fallen as far as they're going to fall, the next move in rates will be upwards (Wilson, 2003).

That's not necessarily bad news for retailers, though it does remove a powerful growth engine that's been primarily responsible for driving the sector in the past few years. Much now depends on how robust the economy really is and how many jobs can be created. If finance minister Trevor Manuel is right in predicting GDP growth of close to 6 percent in the coming few years, then the retailers should continue to enjoy strong earnings growth, although not at the same rate as experienced recently.

Analysts are divided in their views as to what will happen to retail shares. Many believe the sectors have peaked and it's now time to take profits. Others, such as Investec asset management's Forsyth, believe share prices are discounting about a 300 basis-point rise in interest rates over the next year or so.

A huge factor influencing the future behaviour of the shopping population is the negative impact of the growth of HIV/Aids in South Africa (FMCG Direct, 2004). HIV/AIDS is a difficult subject considered by retailers - it is a serious issue for this sector as it impacts on a number of fronts; on the size of market, employees (their health, performance and cost to the company) and suppliers (costs and efficiencies). This multi-channel impact makes it a complex issue for all retailers, whether they are operating in the more severely affected markets, or not. Retailers are beginning to take the issue seriously; legislation is expected to take it a step further with guidelines around quantifying and reporting on the impact of the

disease on companies (Wilson, 2003). The situation is to be further complicated by an expected increase in bad debts, primarily at the lower end of the market, brought about by a high prevalence of HIV/AIDS. Companies are looking to hedge these risks by expanding into markets outside of South Africa (Wilson, 2003).

#### 4.2.4 JD GROUP AS A RETAILER IN SOUTH AFRICA

As seen in the section about the retail industry in South Africa, a fundamental change has taken place in the middle mass market; it is expected that this cycle will persist until at least 2010 (Wilson, 2003).

A steady increase in households in South Africa will support the upholding of this growth. Growth in households are predicted to increase from R9,8 mill in 2005 to R11,2 mill in 2008. This growth necessitates an increase in spending to account for new households (Wilson, 2003).

Food & drug's performance, though strong, was not as strong as the general retailers'. The reason is simple: as consumers get more disposable income as a result of tax breaks and lower interest rates, they don't necessarily spend more on food but certainly spend more on clothing, furniture and appliances (Wilson, 2003). The prospects for the short to medium term for retailers, and specifically for furniture retail seem to be prosperous. The JD Group can be seen as a very influential retailer in the South African retail arena. A brief overview of the JD Group LTD will be given.

##### 4.2.4.1 AN OVERVIEW OF THE JD GROUP

The JD Group was established in 1983, when the first Price and Pride store opened. The JD Group-story involves one successful merger after the other. Price 'n Pride was aimed at the very low end of the market for which no one else in the retail industry catered. In 1986, Joshua Doore was acquired by the JD Group. Joshua Doore was the first furniture store to introduce catalogue sales to the market. Rural people could participate in the purchase of furniture supplied by the JD Group. Because of the merger of Price and Pride and Joshua Doore the group's profit increased from R500 000 to R9 million.

In 1988 Bradlows, Score and World Furnishers was acquired. The structure of the business was altered slightly. World Furnishers was absorbed into Score and Price 'n Pride and the Group's name was changed to the JD Group. In 1990 the JD Group opened an enormous warehouse of more than 40 000 m<sup>2</sup> in Aeroton and developed a digital scanning system especially for the JD Group's use.

In 1993, the JD Group acquired the Rusfurn furniture group with 350 stores. After this merger, the JD Group became the biggest furniture retailer on the African continent. Rusfurn contributed to the growth of the JD Group to over 500 stores, and its employees to over 10 000. The Rusfurn acquisition included the two brand names Russells and Electric Express.

In 1994 JD Group International was launched to handle the business in Namibia, Botswana, Lesotho and Swaziland. Also in 1994 the JD Group share price grew to R23 per share. The year 1996 was a year of technological advancement for the JD Group. The Satellite Communication System (VSAT) was installed in all the JD Group stores, which enabled faster and more efficient communications between the stores and head office. In 1999, the JD Group bought 90 percent of the shares in the Polish retailer, Abra. Also in 1999 technology was expanded by opening 12 test stores for the financial services concept. Unfortunately in 1999, 369 stores in the JD Group were burgled, and caused the JD Group to lose millions of Rands.

In 2000 the JD Group's strategy of acquisitions was blocked by the Competitions Tribunal when the JD Group wanted to acquire Ellerines. Nonetheless, the share price for the JD Group rose to R50 per share. In 2001 the Score brand was discontinued and its stores were incorporated in the Price 'n Pride Chain.

In 2003 the Competitions Tribunal approved the acquisition of the Profurn Group (including the Morkels, Barnetts and Hi-Fi Corporation brands) by the JD Group. With more than 1 000 stores, 16 000 employees, 2 300 vehicles and R4 billion in merchandising, the JD Group can be classified as a giant in the retail sector. The JD Group philosophy is one of the most important driving factors behind the retailer's success.

#### 4.2.4.2 THE JD GROUP PHILOSOPHY

The philosophy on which the JD Group builds its activities is:

“Satisfying the consumer in the pursuit of consistent, acceptable profit growth through the ongoing development of employees and by being innovative in everything the JD Group do, in particular merchandising and marketing, the development of supplier alliances based on sound business principles, and the ongoing development of management and leadership skills, while remaining conscious of the social responsibility to the community at large” (Hughes & Foulds, 2004:6).

#### 4.2.4.3 THE JD GROUP PROFILE

The JD Group, a mass consumer financier, is South Africa’s leading furniture retailer operating through eight chains in southern Africa, one in Poland. The JD Group is listed on the JSE Securities Exchange South Africa in the Cyclical Services: General Retailers – Hardlines sector and on the Namibian Stock Exchange – Retail sector. Each chain has its own identity, merchandise range and market profile concentrating on offering customers a wide range of value for money: quality furniture, appliances, home entertainment and consumer finance products, supported by a high level of personal service. This is indicated in Figure 5.1. The JD Group serves the mass market through a total of 978 (2002: 695) stores in urban and rural areas across southern Africa and 26 (2002: 22) stores in Poland, generating annual revenue in excess of R5,9 billion (2002: R4,0 billion) and an annual cash inflow of some R5,1 billion (2002: R3,4 billion) from trading activities. When a graph is drawn with the focus on affordability and user functionality as the two axes as in Figure 5.1 the brand names inside the JD Group form a staircase, starting with Barnetts in the lower left corner and end at the top right with Bradlows. The rest of the staircase consists of Price ‘n Pride, Joshua Doore, Russells and Morkels. Hi-Fi Corporation and Electric Express, the JD Group category specialists, are the two brands that are not included in the staircase. Abra, the brand name trading in Poland is also not included in the staircase (Lowies, 2004:2).

The operational management of the JD Group are responsible for driving the strategy in the chains. At operational management level, plans are developed for the JD Group with input from the chains and service departments. Once approved, they are passed on to the individual brands and service departments for alignment and implementation. With such an extensive scope of business like the JD Group (Hughes & Foulds, 2004:65), the measurement of intellectual capital became vital in the competitive retail environment for future strategic advantages.

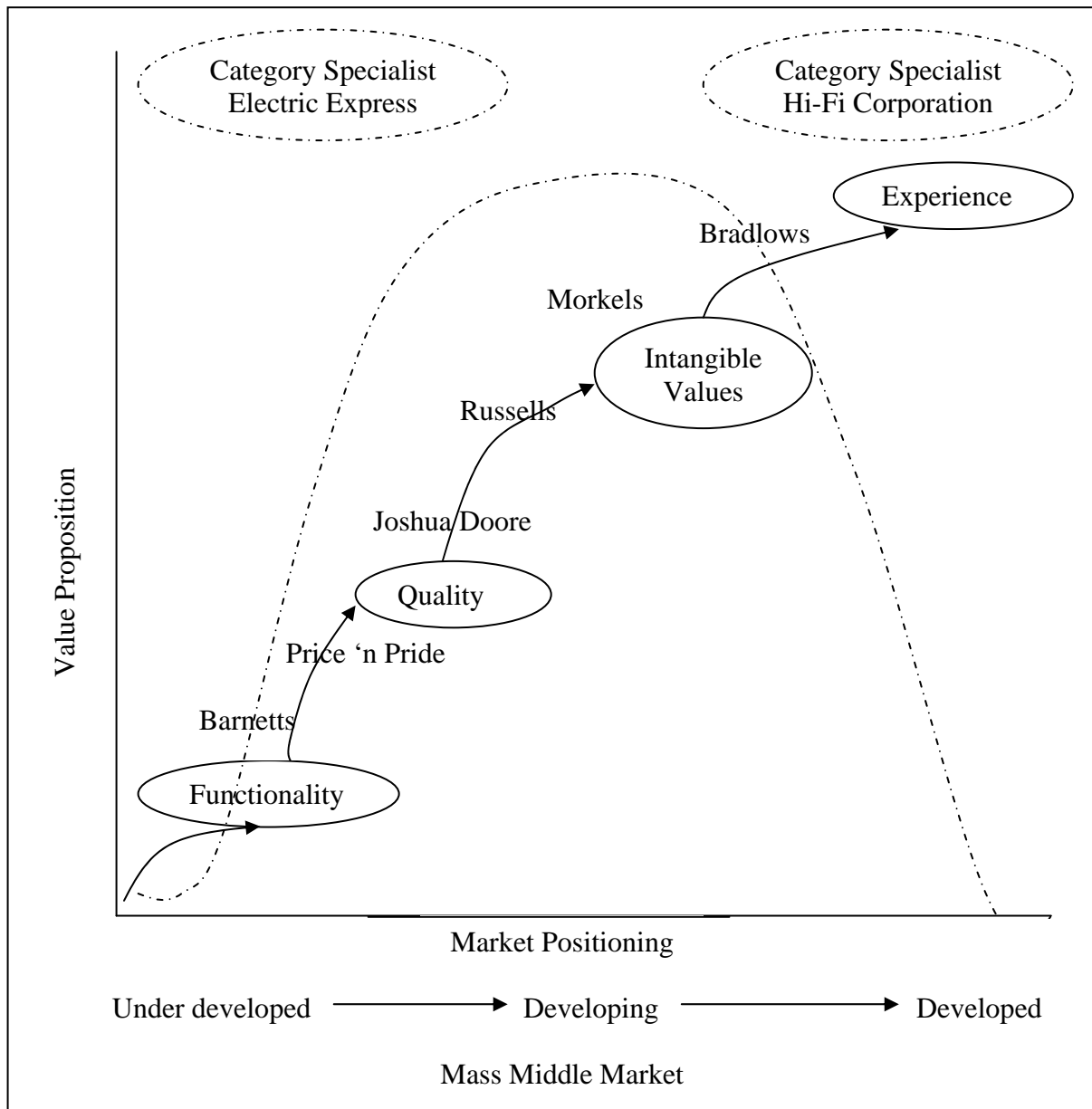


Figure 4.1 The JD Group Brand names by market positioning and value proposition  
Source: Lowies, 2004:2

#### 4.3 INTELLECTUAL CAPITAL MANAGEMENT IN THE JD GROUP AS A RETAILER IN SOUTH AFRICA

There was a need to investigate the establishment of an intellectual capital management programme within JD Group. Even though the prospects for the future seem exceptional, the need for sustainable growth exists. This can only be done if all the assets' value in the company is unlocked, i.e. employees, customers, processes, culture and more.



As emphasised by the JD Group philosophy, it is supportive of the development on an intellectual capital management program. The focus of the philosophy is mainly on intangibles:

- The customer
- The employee
- The stakeholder and investor
- Leadership
- The community
- Innovation.

The JD Group are very conscious of their intangibles, and recognise that the organisation is not viable without these inputs. However, no formal company-wide process has been implemented to measure, track and manage the value of the intellectual capital in the company. Several smaller loose-standing projects were identified throughout the company, but no standards and company wide scope were defined. This study will focus primarily on the status of managing an intellectual capital management model. Several important individuals from departments across the organisation have been identified as an optimal starting point for gathering of valuable insights by means of interviews.

The individuals that were chosen from the JD Group for the sample were identified so as to work with intellectual capital assets on a day-to-day basis. Many of them create new knowledge daily and perform invaluable tasks and processes for various stakeholders and customers that are vitally important for the company's growth, sustainability and success. Customer service is a huge aspect of proper service delivery, a good working culture and state-of-the-art processes are important to the suitable delivery of timeous information to the right people at the right time. Leadership is very important to scan the internal and external environments, to keep up with the competition as well as advising the company how to be one step ahead of the competition at all times and to be innovative. The sample of people interviewed:

Table 4.2 The Sample of respondents interviewed

Respondents	Title	Department
1.	Director: Sales and Marketing	EXCO
2.	Group Executive: Strategy	Group Strategy
3.	Strategy: Group Projects Administrator	Group Strategy
4.	Group Executive: Strategic Projects	Strategic Projects
5.	Group Executive: Human Resources	Human Resources
6.	Russells: Corporate Admin Manager	Russells Corporate
7.	IT: Chief Information officer	IT and Communications
8.	IT: Systems Executive	IT and Communications
9.	IT Executive: Operations	IT and Communications
10.	IT Executive: Quality Assurance	IT and Communications
11.	Marketing: Data Statistician	IT and Communications
12.	IT: Systems Implementer	IT and Communications
13.	IT: Systems Manager	IT and Communications
14.	IT: Technical Training Developer	IT and Communications

All these interviewees were contacted and appointments were made for approximately half an hour to talk to them with regards to their views on intellectual capital management in the JD Group. In Chapter 5 the data derived from these interviews were coded and interpreted in order to establish whether the JD Group might benefit from an intellectual capital management program.

#### 4.4 STATUS OF INTELLECTUAL CAPITAL MANAGEMENT IN JD GROUP BEFORE STUDY

In a company of the magnitude of the JD Group, managing intellectual capital is a huge task. Projects were identified that might partially attempt to measure some of the intangible assets in the organisation. One of these projects is the Business Performance Indicator (BPI KEY) Project.

Two sections in the BPI Report focus on the Customer profiles and employee competency and retention. Some measures included in the customer profiles section are Ethnic Analysis, Age Analysis and Income Analysis and measures included in the Employee competency and retention section are employee turnover, employee complement and employee competency. These measures are monitored in the operating branches of the entire company, and even though it is a starting point to get an idea of the possibilities of the measurement of intellectual capital, it is not expansive enough for future growth.

For the purposes of this study certain intangible assets were identified to uncover a starting point for an intellectual capital management framework that could be implemented in the JD Group. Several areas were identified that could have a significant impact on the retail company in South Africa. While these are not the only intellectual asset areas, it was decided to focus on these variables in order to keep the projected uncomplicated and simple and to gain valuable insight in the core aspects that might influence the company directly. The existence and management of these intellectual capital assets will be investigated by interviewing specific role players in the company and a recommendation will be made in order to suit the wider company. At a later iteration of the project, several other intellectual capital assets could be considered to be implemented to enlarge the scope, when more departments are involved.

The Seven areas that were identified were:

- Relationships
- Knowledge
- Leadership and Communication
- Culture and Values
- Reputation and Trust
- Skills and Competencies
- Processes and Systems (United Kingdom, Department of Trade and Industry, 2001).

From an intellectual capital management model perspective (also known as intangible assets / intellectual capital framework) as described in chapter 3, the model would look like this:

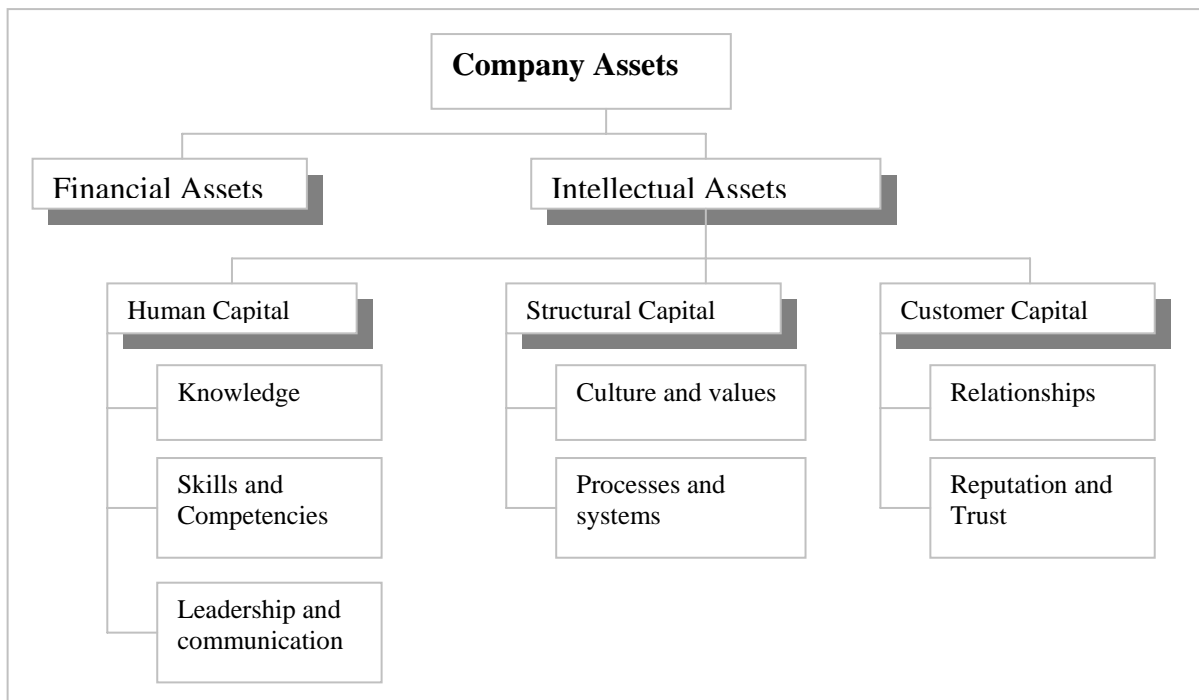


Figure 4.2. Intangible assets /intellectual capital framework for the JD Group as adapted from Marr & Adams, 2004:20-21.

#### 4.5 CONCLUSION

As was seen in chapter 4, today's retail companies face a daunting array of business challenges: the ability to react quickly to changing market conditions, whether to meet an unexpected challenge or grab a rapidly closing window of opportunity. From ringing up a customer's order at the front-end to ordering products from an overseas supplier, retail companies rely heavily on intellectual capital throughout their enterprises. The common thread running through all of the challenges facing retail is the need for business agility – anticipating or responding to changing conditions. Business agility encompasses three major areas:

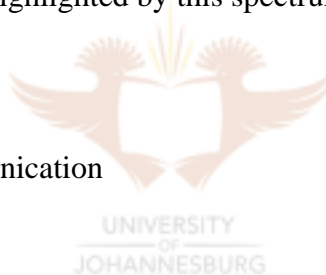
- Empowering employees through knowledge management (Human Capital)  
Empowered employees grow an organization's intellectual capital when they have the information and the tools to make better, faster decisions.
- Connecting customers and integrating business partners (Customer Capital)  
Multi-channel retailing and more efficient supply chains combine to develop deeper and richer relationships with customers and suppliers.

- Operational excellence in business operations (Structural Capital)  
Establishing and maintaining fluid organizations allow companies to transform strategies quickly, as well as respond rapidly to new business opportunities.

A small number of measures that are understood and valued by everyone is much better than a prescriptive set of rules which don't appear to have obvious business benefit. Intellectual capital may be viewed from the perspective of each intangible area in turn to help identify areas of strength and weakness, hence opportunities and threats.

This study highlights the need for the JD Group to look beyond their existing financial statements to consider how a wide spectrum of excluded intangibles contribute to their current and future potential to create value. It is the overall mix of tangible and intangible investments that differentiate one organisation from another, and with this mix a spectrum of intangibles are identified as the key components of brand and competitive advantage. The intangible 'investment areas' highlighted by this spectrum are:

- Relationships
- Knowledge
- Leadership and communication
- Culture and values
- Reputation and trust
- Skills and competencies
- Processes and systems.



Based on these intangibles, an interview will be held with several important contributors to intellectual capital in the organisation to identify the strengths, weaknesses, opportunities and threats associated with the overall spectrum, in order to manage and develop action plans for the implementation of an intellectual capital management framework if a need for it is identified. In Chapter 5 the methods used to interview the sample of people in the organisation and the interpretation of the findings will be discussed.

## CHAPTER 5

### EMPIRICAL STUDY

#### 5.1 INTRODUCTION

In the preceding chapters the theoretical background for intellectual capital and the intellectual capital measurement models was given. The importance for the measurement of intellectual capital in an organisation was explained and the types of models and important attributes, strengths and weaknesses were discussed.

In this chapter the researcher wants to establish the status of intellectual capital management in a retail company in South Africa. It will be focused on establishing the understanding of intellectual capital management by the retail company and to determine whether the necessary knowledge enablers are in place to take an intellectual capital management program forward. The data and information were collected, analysed and interpreted, using the qualitative research methodology to determine the probability, to implement an intellectual capital management program in a retail company.

#### 5.2 RESEARCH METHODOLOGY

##### 5.2.1 QUALITATIVE RESEARCH

By means of the structured process of interviews, it is possible to research aspects that could not be seen or sensed (Gorman & Clayton, 1997:52). Interviews in qualitative research have two main advantages. Firstly open questions are encouraged in individual interviews where important relationships between aspects are highlighted. Secondly, the free dialogue make interaction possible between researcher and respondent and could result in new and unexpected subjects to create a better understanding for the research at hand.

##### 5.2.2 RESEARCH OBJECTIVES

The literature study emphasised that the measurement of intellectual capital in an organisation is very important for sustainable growth. With the current South African economic climate in mind, the question was raised as to the status of intellectual capital management is in retail companies in South Africa, and if it would be viable to implement an intellectual capital management tool to aid these companies.

The specific objectives of the qualitative study were:

- To establish if the concepts of knowledge and intellectual capital management are comprehended in the retail company
- To establish the attitude towards measuring intellectual capital in the retail company
- To determine whether the enablers of intellectual capital are in place for the implementation of the intellectual capital management tool
- To get a broad overview of how intellectual capital management aid sustainable growth for the retail company.

### 5.2.3 DELIMITATION OF THE SAMPLE OF RESPONDENTS FOR THE RESEARCH

The researcher has selected individuals from all levels in the retail company that are directly involved with everyday creation or use of intellectual capital e.g. people working with the human, structural and customer aspects of the company. The researcher selected 14 respondents ranging across Directors, Executives, administration clerks and professionals in service roles. In the following section, the methodology, population, sample and data collection procedure will be discussed.

#### 5.2.3.1 METHODOLOGY

Grounded Theory spans the process of the systematic collection of data, development and the provisional verifying of the systematic data collection and analysis pertaining to that phenomenon, through to generating a new theory that is intelligible and usable by those who are in the situation being studied and is often open to comment and correction by them. Therefore data collection, analysis and theory stand in reciprocal relationship with each other. Grounded theory therefore is characterised more by the research process that is followed to generate it, than by the content of the theory itself (Pearse & Smith, 2005:48).

Glaser and Strauss's grounded theory was starting at the point that the adequacy of a theory depended upon the research process that was used to derive it (Pearse & Smith, 2005:48). A methodology of generating theory that was based on data collection was developed. The theory's hypotheses and concepts are generated and established during data collection and analysis by

collecting, coding and analysing data concurrently. Grounded theory therefore seeks to build theory based upon the reality that is being systematically observed by the researcher. In contrast, quantitative research methodologies are typically based upon the statistical testing of hypotheses that have usually been derived from the study of the existing literature (Pearse & Smith, 2005:48).

In the current study grounded theory was chosen because of the limited research done in this field of study. There was limited literature available regarding intellectual capital management in a retail company in South Africa. It was decided to do ground work based on the experience and insights of knowledgeable individuals working in a retail company in order to collect data, analyse the findings and develop a theory regarding the status of intellectual capital in a retail company, and the need for implementation of an intellectual capital management tool.

The suggested sample signifies that the respondents that were chosen are knowledge-rich individuals and will contribute valuable insights to the study. Sampling in qualitative research is normally structured: this means that instead of picking any selection of the population for the study, a smaller group of people with selective attributes, behaviour or experience is selected to represent bigger groups deemed as important to the researcher (Walker, 1985:30).

Because of the lack of research with regards to intellectual capital management in retail companies, the researcher chose to interview respondents from all levels of the organisation involved with the three different aspects of intellectual capital (human, structural and customer) in order to establish an organisation-wide understanding of the status of intellectual capital. The method that was used to collect information was through personal interviews, where semi-structured questions were mainly used.

#### 5.2.3.2 POPULATION FROM WHICH THE SAMPLE WAS SELECTED

The researcher chose fourteen respondents who comprehend the importance of intellectual capital for the organisation's future growth and are involved in the generation and use of one or more of the aspects of intellectual capital (human, structural and customer capital). The respondents were selected from all levels of the company and are representative of all the different chains and service departments involved in intellectual capital management.



### 5.2.3.3 SAMPLE

At the time of the interviews, all respondents were involved in creation and use of intellectual capital in the retail company. The sample of respondents who were interviewed, were listed in table 4.2 in Chapter 4.

### 5.2.3.4 DATA COLLECTION PROCEDURE

The researcher selected 18 questions to be asked of the respondents (See Appendix A). The questions were formulated to determine the current status of intellectual capital management in a retail company. In order to ensure that the researcher captured all communicated information, all interviews were transcribed. A comparison of all the responses was done and results were annotated in order to identify problem areas and to underpin strengths and weaknesses of intellectual capital management in the retail company.

The motivation behind using interviews to collect data from the respondents was that interaction with the respondents would add value to the study. Because the area of study is not well-known in the retail environment, it would be better to guide the respondents through the questions asked. It was expected from the respondents to give detailed answers. The researcher is permitted to make assumptions based on the information gathered.

## 5.3 ANALYSIS AND INTERPRETATION OF DATA

The data gathered from the interviews is analysed and interpreted in accordance with the grounded theory. The use of qualitative data is problematic because of a lack of a specifically developed method of analysis. It was difficult to determine underlying patterns in the data because vast amounts of rich information were generated. The researcher considered the grounded theory because it was the most appropriate analysis method for this study. Turner (1998:227) emphasises the value of grounded theory when working with qualitative information gathered from participant-observation.

### 5.3.1 PREPARATION OF THE DATA FOR THE ANALYSIS BASED ON THE GROUNDED THEORY

Words are mostly used in qualitative research instead of figures, and there is very limited structure in it. This might be the biggest challenge when doing qualitative research. The best approach to

analyse the data is by coding the interviews, and then analysing according to the grounded theory. In this study the analysis of the data was coded by selective coding.

Selective coding is the highest level of coding, and includes the selection of core categories, systematic equations with other categories, validation of these relationships, and applying additional information to categories that need to be developed and defined (Strauss & Corbin, 1990:116).

### 5.3.2 PROCEDURE HOW THE DATA WAS ORGANISED

The data derived from the interviews was organised by:

- Transcribing.
- The transcriptions were analysed according to selective coding (Strauss & Corbin, 1990:204-218). From this categories were identified that reflected the reactions of the respondents, and that represented the various themes in the interview schedule.
- All data was analysed by making use of notes, and diagrams.

### 5.4 ANALYSIS AND INTERPRETATION OF THE DATA IN ACCORDANCE TO THE IDENTIFIED CATEGORIES



In the following section the reaction of respondents is reflected in the categories identified. The categories are sorted according to the order the questions were asked in the interview.

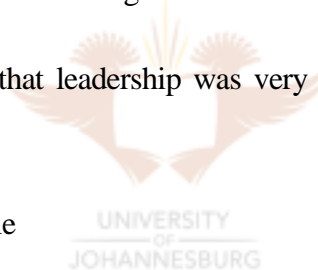
#### 5.4.1 What is the role of intellectual assets relative to financial assets in the corporation?

Innovation, Customer relationships, brand value and employee knowledge, along with other knowledge and intellectual assets are the drivers of future corporate wealth (as established in question 1, 2, 3 in Appendix A).

##### 5.4.1.1 ANALYSIS

- For nine of the respondents, financial drivers were extremely important to the future growth of the company. Some of the most important drivers that were identified by the respondents were:
  - Increase in unit sales

- Increase of average sale per product
  - Increase in average margin per product
  - All activities must contribute to the ledger of the company
  - Profitability
  - All management information to monitor the performance of the company.
- Seven of the respondents recognized that the people component of the organisation was vital for the future growth of the company.
    - The employee must display the core essence of the brand
    - Committed staff
    - The organisation is as strong as its workforce.
- Three respondents said that leadership was very important for the future growth of the company.
    - Management style
    - Feedback to people.
- Five of the respondents said that targeting the right market in the future was very important for future growth. Ways as to how this was already being done in the company was:
    - Diversification
    - Differentiation
    - Change in target market
    - Target market is maturing
    - By launching the right promotions
    - Positioning of brands



- Research was done to analyse the psychographic profile of the consumer experience.
- Three of the respondents identified technology and processes as an important driver to future growth for the organisation.
- Other factors that were identified were:
  - The change in the National Credit Bill
  - Integrated Business Intelligence Capability to identify a succinct set of performance metrics.

#### 5.4.1.2 INTERPRETATION

Financial measures are still viewed as the most important area to be measured in the company. However, the perception of the importance of intangible assets is well developed in the company across all departments. A very clear understanding of the concept of intellectual assets already exists, even if the terminology is not very pronounced. The inefficiency of financial measures on its own is understood and aspects like the value of the company's employees and leadership, and the value of customer relations is seen as a major contributing factor to the bottom line of the organisation. Factors influencing the company from the external environment such as the changing National Credit Bill and the change in the middle mass market are also seen as influencing factors. To a lesser extent, technology was seen as a contributing factor to the company being successful in the future if compared to financial measures.

5.4.2 To manage intellectual capital effectively, these intangibles need to be measured. How do you propose that it be done and why (as established in question 4 and 5 in Appendix A)?

#### 5.4.2.1 ANALYSIS

- All fourteen respondents agreed that intellectual capital should be measured on an ongoing basis in the company. Only one of the respondents said that he is not sure if there is real value to try and quantify it as an asset on the balance sheet. However, a balanced scorecard would be beneficial to the company.

- Twelve of the respondents mentioned that in many of the departments across the company there are several attempts to measure very specific subsets of intellectual capital, for example:
  - Internal and external research structure: The Executive Committee (EXCO) of the organisation have a monthly meeting where the political, legislative and social terrains are being investigated and discussed with the help of Econometrics and the Institute of Future studies (University of Stellenbosh) and market research.
  - Project management office: where all strategic projects are centrally registered, the project charter is defined, the execution of the project is monitored and controlled, and the project is realised. All progress of projects is tracked, and is stored in the knowledge base for future use.
  - Group Differentiation exercise: What does the customer look for in the brand? Establish in the mind of the consumer a unique value proposition.
  - People Differentiation exercise: a differentiated human resource policy allows for a differentiated customer service. How do the employees connect with the customer in the chains?
  - Succession planning and leadership.
  - Ask Africa: independent customer survey by an individual brand who measured who the customers are and the connection between the customer and the brand.
  - Mystery shopper campaign: the interaction of the employees in the branches with the customer is measured to establish how the employees live the brand.
  - Microsoft Operational Framework (MOF): identifying the skills within each job profile especially in the Information Technology department.
- Several areas were noted where intellectual capital is not measured in the JD Group and where there is a need for measurement:
  - There must be some measurement for learning and growth and structural capital.

- It should be realized that investment in people and systems are an investment in intelligence.
- A mechanism to measure customer satisfaction in a scorecard environment.
- Mechanism from external research, internal management and research to come up with a score to put on a balanced scorecard.
- Performance measurement:
  - Should there be a financial incentive linked to it?
  - The achievement of intangible measurements of customer satisfaction in the incentive process.
  - Incentives should have a component of employment equity.
- Employee stability:
  - How many employees leave,
  - How many employees want to work for the company,
  - Service record per employee.
- Measurement in order to improve motivation of employees.
- Measuring of perception of processes from the user side.
- It is very important to measure innovation, because innovation underlies all other aspects of intellectual capital. Innovation is relative to financial performance, because thereby you invent better ways to gain income, and market share. Innovation comes from diversification and not from technology and is vital in continually keeping the edge.

#### 5.4.2.2 INTERPRETATION

Many gaps were identified because the current intellectual capital measured in the organisation is not linked enough to form a whole picture and display it meaningfully in a balanced score card

view. Three of the respondents instinctively suggested the balanced scorecard approach for measurement of intellectual capital and another respondent suggested that the portal would be an ideal point to collect input for intellectual capital measurements. Most of the gaps that were identified are in terms of measuring the human capital and the process capital of intellectual capital. Most leaders in the organisation are embarking on programmes to measure intellectual capital in their field of expertise.

5.4.3 What considerations are used to build a sound business case for intellectual capital management in this company and what are the potential pitfalls of trying to implement intellectual capital management (as established in question 6 and 7 in Appendix A)?

#### 5.4.3.1 ANALYSIS

- Seven of the respondents said they would build a sound business case for intellectual capital by first establishing what intellectual capital areas are important to the organisation. The objectives of the organisation would play a fundamental role to give substance to the business case.
- One respondent would try to quantify the business case with some monetary value or some form of the relative value of having a high degree of intellectual capital as opposed to having a low degree of intellectual capital. A stand can then be taken on how the business can be improved if intellectual capital management were in place. If that can be quantified, spending money at the place of best return can be justified.
- Another respondent raised the fact that several members of top management will retire soon, and that would imply that almost 120 to 130 years of furniture retail experience that is locked in these peoples heads, will be lost to the company. It is imperative to get focused concentrated learning from these people who are gurus in the retail industry. Hence the leadership development programme.
- Yet another idea for building a sound business case was to investigate how to create sustainable innovation into the future. Generally new business is created by creating new projects. The question of how real knowledge and intellectual capital could be extracted and utilized actively in any given project, would be a supportive argument. Good knowledge management practice states that expertise that is not immediately obviously

related to the problem and should be introduced to the projects to broaden the spectrum and build more visionary solutions.

- Several pitfalls were identified when trying to implement an intellectual capital management program:
  - Substantial amounts of money could be spent on an intellectual capital management program without realizing any benefit from it.
  - Credibility is certainly a very important factor: not knowing which intangible areas to focus on and putting effort into the wrong places are also identified pitfalls.
  - Knowledge is power, and therefore there is a certain amount of politics surrounding knowledge. Many 40 year old males with a lot of experience in retail are threatened by 20 year olds that have the same extent of knowledge. People who have been in learning environments are far more able to understand concepts and frameworks and think strategically. People who have been in the working environment for long, battle with these concepts.
  - Good intellectual capital management requires a change of thinking in organisations and a culture where sharing of knowledge is rewarded.
  - Most knowledge management projects tend to be driven from the IT department. There must be broader cultural buy-in right from the top of the organisation to the bottom. An intellectual capital management project shouldn't be a technology project, it should be an organisation project.
  - Many similar initiatives were started with enthusiasm in the past, but it did not get enough emphasis and faded away.

#### 5.4.3.2 INTERPRETATION

There are several valid reasons in the JD Group for starting to build a compelling business case for the implementation of an intellectual capital management programme. If competitors start to manage their intellectual capital more effectively, they will certainly come up with more effective solutions that are more cost effective over a quicker period of time. Therefore the JD Group would stand a chance to lose the competitive edge. Losing valuable employees through



retirement or resignation could also mean a huge loss of intellectual capital to the organisation. As indicated in the previous section, innovation was identified as one of the core drivers in keeping the competitive edge. Innovation should be one of the building stones of a business case for intellectual capital. In order to validate the monetary expenses for the project, it could be determined which tangible assets could be improved by working on the intangibles. If you can't measure it, you can't manage it. However, there are also pitfalls that need to be taken into account when embarking on a project like this. Previous experiences and lessons learnt should be taken into consideration. The change of culture to accept the measurement of intellectual capital would be one of the biggest challenges in the JD Group.

5.4.4 Detection and correction of errors to align inputs and processes with outputs and outcomes to monitor performance (as established in question 10, 11 and 18 in Appendix A).

#### 5.4.4.1 ANALYSIS

- Formalized and informal routines
  - One of the respondents said that informal routines are more important than formal routines because formal routines can be documented. It is necessary to convey one message through to the organisation. Informal routines are in the behavioural environment and JD is battling with that at the moment. E.g how do you convey the message that a value of JD is for people to be open and honest? It is not a written rule, but it is accomplished by training, development, learning, and finding ways of doing that is commonplace.
  - Eight of the respondents focused on formalized routines. Formalized routines are perceived in terms of business processes, how they work and how they are documented. It is considered a key source of intellectual capital.
  - One of the respondents said that there exist heuristics in the business processes which are not well understood and are rule of thumb but not documented. The retail industry is made up of a number of business processes, and top management often think that they understand the business. Often the business processes are not fully understood.

- It was noted by one of the respondents that manuals of written documentation of processes and flow of the business process is very important, otherwise it would be difficult to identify issues and problems. If changes are requested to the systems and processes a clear understanding must be obtained of what the implications of the change would be.
- Formalized routines allow for economies of scale. The JD Group have a diversified and distributed nature. It is possible to trade in 1000 branches across the sub continent and have 8 chains that target different areas of the population and different market sectors because there are centralised service departments. All routines and business processes should work similarly for all of the chains. When a new chain is acquired, the service departments are in a position to service the additional workload without too much adjustment.
- Two respondents felt that formalized routines give them a clear understanding of what is expected of them. There is no room for error if the formalized routines are followed.
- One respondent said that formalized routines save time and human resources. Processes and routines should be there to make the business more efficient. If the processes are applied correctly, the overall quality should improve.
- Optimising business processes
  - Three respondents suggested Business Process Management at a regular interval to ensure all business processes are working optimally and are constantly evaluated. Continuous testing and fine tuning are extremely important. The necessary external monitoring tools or agents should be in place to monitor the performance and give warning when something goes wrong. The ideal would be if there were a team in the organisation that would take the responsibility of business process optimisation.
  - Business processes should be standard across all operations in order to optimise the skill and knowledge required to maintain the processes.
- Methods to detect and correct errors

- Five of the respondents said that validating against a trusted and known data source is very important to detect and correct errors in their area of work.
- Two respondents recommended looking at exceptions rather than absolutes and managing those exceptions.
- Six of the respondents said that they tried to be pro-active in detecting errors by building in checkpoints and to be informed early about problems. Three of the respondents receive early warning via the means of messaging (e-mail or sms).
- Five respondents said that they detect and correct errors by being reactive. Mostly there is feedback from the user complaining that some figures are wrong or that a process does not work optimally. Three of the respondents rely on information from the quality assurance team. For example in the IT operations meeting there is a report back on each change control entered. Many measuring tools are in place to detect errors and correct them.

#### 5.4.4.2 INTERPRETATION

Formalized and informal routines give guidelines to employees on how to perform optimally in their work. It gives structure to the work they do and allows them to adjust and correct errors as they find them. Formalized routines also aid in being pro-active and prevent huge errors from occurring. Proper testing, watertight specifications and thorough training are part of business processes optimisation. Credibility is extremely difficult to obtain and is very easy to lose quickly. It is very important to have a constant focus on validation to maintain credibility. User input is also an important aspect in the detection of errors. If business processes are working optimally, but the perception from users is skewed, the outputs and outcomes will be unsuccessful.

5.4.5 How would the hidden value of innovation capital be uncovered in the organisation (as established in question 12, 13 and 14 in Appendix A)?

#### 5.4.5.1 ANALYSIS

- Three of the respondents said that the JD Group has no real patents and copyrights. One of the respondents said that legal advice was contracted to register all the JD Groups trademarks in terms of colour, font, jingle etc. All brands have also been quantified, registered and values have been put against them.

- Nine of the respondents believe that the JD Group's trademarks, brands and trade secrets are giving them a competitive advantage. It is directly related to the effort that is put into marketing the brands and positioning the brands in line with the current and potential target market. There is wide brand acceptance.
- The JD Group has excelled at building brands. HiFi Corporation is clearly one of the success examples. The HiFi Corporation brand is seen as the cheapest brand at all times, but the shopping experience is often unpleasant. There is a project called the third life cycle of HiFi Corporation which is built on underlying processes which, are aiming to enhance the customer experience rather to detract from it.
- The power of building a brand is: when the customer is thinking about buying a reasonably good lounge suite at a low cost because it is discounted and he wants to buy it on credit, he should immediately think of Joshua Doore as opposed to the competitors. Barnetts and Bradlows are both over 100 years old, and are household names in South Africa. The model of the market place and the value proposition is exactly the essence of what was done with the differentiation exercise.
- Three of the respondents believed that technology is giving the JD Group a competitive advantage, but that there is lots of scope to use the expertise and experience of the brands effectively to build an e-commerce solution, for example. JD Group seems to be limited in expansion possibilities – no more furniture acquisitions will be allowed. Technology could aid with the aggressive expansion plan that is still in the minds of the top management.

#### 5.4.5.2 INTERPRETATION

Exposing the hidden value of the JD Groups innovation capital already proved to be very advantageous. The differentiation process has put the JD Group in little spaces which they have identified and which the competitor has not. Share prices indicate that investors trust the JD Group, and the fact that the JD Group is so strong in the market at the moment, is an indication that the differentiation strategy has worked very well for the company. A tremendous lot of hidden value has already been uncovered. By means of the people differentiation project there is much more hidden value to uncover in the future.

5.4.6 What are the major criteria used for policy making in the organisation (as established in question 15, 16 and 17 in Appendix A)?

#### 5.4.6.1 ANALYSIS

- Decision making patterns, value systems and philosophies.
  - Seven of the respondents' view is that the decision making patterns, value systems and philosophies are mainly made by top management. It is not viewed as a disadvantage that decision making is top down.
  - Three of the respondents view it as chain specific. It is a multifaceted cultural environment which is a by-product of a growth strategy that takes place through acquisitions. A distinct group culture is seldom created: you have multiples of cultures that are merged into a singular entity without the singular cultures losing their identity.
- Communication of policies
  - Eight of the respondents felt very strongly about communication in the organisation. They view communication as one of the biggest weaknesses of the organisation.
  - Two respondents felt that the policies are communicated effectively, but not efficiently. There are some programmes focussing on improvement of communication within the organisation, and this would aid the communication process tremendously.
  - An effective feedback loop from the bottom up should exist to affect top level decision makers. Top management are not at fault, however senior and middle management are not communicating values and strategy effectively. Communication tends to go quite fast to a certain level, and then it battles to get into the business unit. There exist many misunderstandings in the organisation because of a lack of communication.
- Shared framework to interpret events
  - Many of the respondents were uncertain of what was meant by a shared framework. After explaining what was meant by a shared framework using the Skandia Navigator view of a balanced scorecard tool and the cause and effect

relationships, eight of the respondents thought that it would be very helpful to motivate people in their work. Putting something in front of somebody that makes them understand that they are part of a whole and their contribution is affecting other facets of the business, would depend on the individual, but a general positive reaction was obtained from the respondents. Most employees are oblivious of the bigger picture and a shared framework will give a better understanding of where you as an employee fit in.

- Two respondents thought that the JD Group are already busy creating one. Another respondent believes that a cultural change needs to precede the implementation of the technology of dashboarding.

#### 5.4.6.2 INTERPRETATION

There exists a strong culture of control because of a strong culture of performance. Policies are decided upon to enforce good business processes and practices and are filtered through tactical and operational structures. Bigger policies are generally gleaned by looking at performance based or internal data, also by gathering external data to see the potential that the market has and by making a cost benefit decision on policies that need to be changed. Philosophies are more in the minds of the leaders. Communication was definitely identified as a tremendous weakness of the JD Group. A shared framework might be a possible solution to this frustration. A shared framework would give knowledge workers the improved ability to make better decisions. Employees spend a lot of time looking for information, and that time might be reduced with a shared framework in place. Less time would be spent redoing things that other people have already done. Lots of time is wasted on verifying decisions that were made.

5.4.7 Do you know of any programs that are currently measuring aspects like customer satisfaction, employee value, innovation, processes or company culture that reports to stakeholders (as established in question 17 in Appendix A)?

#### 5.4.7.1 ANALYSIS

- There is no formal structure that manages intellectual capital at the moment in the JD Group.
- Some aspects of intellectual capital that are already being measured or are in the planning phase to be measured:

- Brand Differentiation
- People Differentiation and workforce engagement
- Customer Care
- Incentive Schemes
- Blue Martini Marketing System.
- Some aspects of intellectual capital where there is a need for measurement:
  - Employee valuation
  - Communication
  - Innovation.

#### 5.4.7.2 INTERPRETATION

Until you have a whole picture you can't measure in single silos. It is not all congruent and in one. Measurement is done at different levels, by different standards and across different chains. There are many programmes that measure intellectual capital aspects in the JD Group, but they tend to be discreet interventions and it tends to be a snapshot in time. There are no systems in place to measure consistently customer satisfaction or innovation or employee valuation.

5.4.8 Do you think it would be useful to implement a single tool that would help to monitor performance, report to stakeholders and uncover hidden value of things that are difficult to measure with current processes and systems (as established in question 18 in Appendix A)?

#### 5.4.8.1 ANALYSIS

- Twelve of the respondents agreed that a single tool for measurement of intellectual capital would add immense value to the organisation. It would be very easy to implement a balanced scorecard tool in the JD Group because all research and developments are already set up to slot into a balanced scorecard type tool.
- Two of the respondents thought that moving to the balanced scorecard would make good business sense. They suggested that the JD Group needs to move to the balanced scorecard

type model where these key performance indicators and trends are exposed. Moving to a balanced scorecard approach will build on the critical things that need to be managed. Expanding it to other equally important aspects which currently don't have emphasis but are contributing to the performance of critical key measures will be possible.

- One respondent thought it would be a good idea to implement something like this, but never a single tool. He was of the opinion that no singular tool can give the best view on all the aspects. The types of measurements for intellectual capital are dependent on the type of information. It is difficult to argue the relevance and usability of the information. If good decisions can't be made from it, there is no use implementing it. The balanced scorecard is too cryptic and prescribed and there are many factors lying outside the scope of the balanced scorecard that also need to be managed.
- Another respondent also did not think the balanced scorecard would be the route to follow. Even if the right information could be obtained, the right decisions would still not be made with the help of such a tool.

#### 5.4.8.2 INTERPRETATION

The JD Group are beginning to understand that there are other intangible aspects of performance that need to be measured as well which contribute significantly to the rest of the operational numbers. If the JD Group started to get into a far more comprehensive view of the business by means of a tool like the balanced scorecard, it would add tremendous value to the organisation. An investment needs to be made now to be able to ride that wave in order to become an intelligent organisation. However, there is a bit of trepidation noticed in the respondents; while most of them are positive and realize the value of such a tool, they realize that the current company culture will probably not receive such a tool very well. Generally the business and its leaders are too concerned with financial results and the intangibles will not be a priority. There are also various opinions regarding what the best tool to use would be. The JD Group as a retail company have made progress in the intellectual capital arena, but several gaps were identified where immense value could be generated for the organisation if it were exploited.

#### 5.5 CONCLUSION

In this chapter the researcher categorised and analysed the data collected from the interviews. The key categories that were identified by means of the selective coding, was:



- The role of intellectual assets relative to financial asset in the organisation
- The effective measurement of intellectual capital
- Building a sound business case for intellectual capital management in this company and the potential pitfalls of trying to implement intellectual capital management
- Detection and correction of errors to align inputs and processes with outputs and outcomes to monitor performance
- Uncovering the hidden value of innovation capital
- The major criteria used for policy making in the organisation
- Current programs that are measuring aspects like customer satisfaction, employee value, innovation, processes or company culture that reports to stakeholders
- The usefulness of implementing a single tool to monitor performance, report to stakeholders and uncover hidden value of things that are difficult to measure with current processes and systems.

In this chapter it was found that the JD Group as a retail company in South Africa don't have a proper intellectual capital management mechanism in place. However, a tremendous amount of work has already been done, which added visible value to the company.

In the following chapter we will look at the implications of intellectual capital in the retail sector in South Africa, while conclusions will be drawn and recommendations will be made.

## CHAPTER 6

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 INTRODUCTION

This chapter provides a summary of the study and conclusions derived from the findings of the research. The recommendation regarding possible implementation of the findings and their implications for further research is also presented.

#### 6.2 SUMMARY

The aim of the study was to determine the status of intellectual capital management in a retail company in South Africa and to suggest that an intellectual capital management tool be implemented.

Chapter one contextualised the study by providing the background to the problem, the purpose of the study and the research methodology. The problem statement and objectives of the research were outlined.

Chapter two reviewed relevant literature regarding knowledge management and intellectual capital management. Knowledge is information that has been found, created, processed, distilled and packaged by the human mind. Knowledge is not static, but is a fluid mix of framed experience, values, contextual information and expert insights. Also included are customers, products, processes, culture, skills, experiences and know-how. Knowledge management is first and foremost a management discipline that treats intellectual capital as a managed asset. The primary goal of knowledge management is to deliver the intellectual capacity of the firm to the knowledge workers who make the day-to-day decisions that in aggregate determine the success or failure of a business. Intellectual capital forms part of tacit knowledge, which is a small but important area of knowledge management. Intellectual capital is very difficult to capture in any system, but is an important resource. In order to manage intellectual capital, it must be measured.

Chapter three addressed the different intellectual capital management tools available. The most vital issues concerned are the types of intellectual capital that is used by the company, the intellectual capital management infrastructure that underpins the knowledge to bring it

more efficiently and effectively to the knowledge worker, and the aid of the specific intellectual capital management tool to enhance the intellectual strength of the user to make the most of the intellectual capital leveraged.

Four basic methods were identified to classify tools of measurement of intellectual capital management: Market capitalization method, return on assets method, direct intellectual capital method and the scorecard method. Five purposes were identified for which the intellectual capital management tools are used: monitoring performance, acquiring or selling of the business, reporting to stakeholders, guide investment and uncovering of hidden value.

Chapter four gave an overview of the status of the retail company in South Africa. The emergence of the aspirational black middle class has altered consumer spending and the retail company faces many challenges to remain competitive. The JD Group as retailer in South Africa was used to complete the empirical study. Based on the philosophy of the JD Group, it was found that the JD Group lends itself to becoming a good candidate for an intellectual capital management program. Seven intellectual asset areas were identified with a focus to gain an insight on intellectual capital management in the retail company in South Africa. From an intellectual capital management model perspective, the intellectual assets were classified as follows:

- Human Capital
  - Knowledge
  - Skills and Competencies
  - Leadership and communication
- Structural Capital
  - Culture and Values
  - Processes and Systems
- Customer Capital
  - Relationships
  - Reputation and Trust.

Eighteen questions were developed in order to draw conclusions based on grounded theory (see Appendix A). Interviews were held with 14 role players in the company and their responses were transcribed and coded in order to assist with the interpretation of the results.

In Chapter five the findings of the empirical study was interpreted. The findings contained in this study have multiple implications and applications. The common theme selected was that more focus is needed in terms of the value contribution of intangible assets, i.e. human capital, organisational capital and customer capital. Because a number of these capital components particularly impact on human resources practices, it to an extent requires change in the involvement of line management.

By implementing an intellectual capital management tool, metrics can be selected and specific intangible asset interventions can be done to provide a framework for benchmarking and improving current people practices. It further creates an opportunity to assess whether intangible assets are sufficiently leveraged towards a competitive advantage and creating future, sustainable business. This will be possible through the utilization of measurement and performance tools, such as the balanced scorecard, which has the capacity to quantify the value that intangible assets create.

There are a number of the initiatives that have already commenced and are currently being catered for, indicating that the value contribution of this specific exercise has not just been theoretical.

Finally, implementing and completing any one of the interventions listed below will require dedicated leadership and focus.

### 6.3 RECOMMENDATIONS



The changes reflected in sections 6.3.1 to 6.3.7 is intended to provide an indication of some of the changes needed in order for a company to remain competitive by means of intellectual capital management, but also to work towards a future, sustainable position.

#### 6.3.1 ORGANISATIONAL CULTURE

Based on the knowledge enablers discussed in paragraph 2.6 in chapter 2, it is very clear that there should be an alteration of the organisational culture in order to aid the successful implementation of intellectual capital management.

The JD Group not only has a corporate culture but a very unique chain culture that differs from chain to chain, in terms of its make-up. One of the areas that will require specific attention is the ability to create a culture that is sufficiently flexible in accepting change and the speed with which change occurs. This has already been partly addressed with the introduction of a Change Management behavioural programme that all HR Practitioners within the group have attended.

It is further intended that HR Practitioners act as change agents and sell on the benefits of a specific change initiative. This is particularly needed at an executive level within chain executive teams.

### 6.3.2 LEADERSHIP STYLE

Complementary to a change in organisational culture, there should be a change of leadership style. Leadership is also a knowledge enabler as discussed in paragraph 2.6.3 in chapter 2.

Certain changes have already been introduced in the JD Group in respect of Leadership and Management Development. A leadership Model and Framework was agreed on during 2003 and is utilized as the core benchmark in terms of developing leadership capacity in the Group. This incorporates a set of ten (10) leadership competencies against which future leaders will be evaluated. It is still necessary to incorporate these competencies into the Performance Management System of the Group for selected occupations.

This has further resulted in the introduction of a number of development programmes, including the Basic Management Development Programme (BMDP), Retail Management Development Programme (RMDP), Advanced Management Development Programme (AMDP), Retail Leadership Development Programme (RLDP) and an Executive Leadership Development Programme (ELDP).

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### 6.3.3 TECHNOLOGY DEPLOYMENT

The third knowledge enabler that needs to be addressed as discussed in paragraph 2.6.2 in chapter 2 was technology.

In terms of specific changes in the technology environment, focus has already been given to the introduction of an electronic learning environment that will be utilized as a supplementary resource in imparting skills to employees, especially in respect of understanding certain business processes within the business process value chain.

Other activities will require the introduction of an ERP for the HR environment, a re-design of all technical learning material in order to deliver such to employees via a technology application and in future elected self-service components at business unit level.

### 6.3.4 HUMAN CAPITAL

Human capital plays an enormous part in the future and success of any company. The following aspects should be considered when implementing an intellectual capital management tool.

#### 6.3.4.1 CAPABILITY FOCUS

As strategic promises turn into daily actions, the JD Group's capabilities need to be redefined to sustain and integrate individual competencies. It is less important who builds the best product today and more important who has the organizational capabilities to build the best product over and over, adjusting when the need arises. In addressing this specific issue the needed contribution of all employees in a company are realized.

According to Ulrich (1997:1-22) research shows that organisations in considering its so-called 'soft capabilities', are moving in four directions:

- Building capabilities of confidence – Individuals both inside and outside the organisation believe that managers will do what they say and maintain their reputation.
- Becoming Boundary-less – Allowing information and ideas to move effortlessly across hierarchal, horizontal and external boundaries.
- Achieving capacity for change – The flexibility and agility that allow constant innovation; and
- Learning - attaining change that builds on and maintains itself.

Employees within the JD Group must ensure that they clearly understand the importance of each strategy, operational business goal and key performance area, in order to cultivate the capabilities that must be created within the company. The JD Group can no longer just hire, train or reward individuals but must rather undertake these activities in the interest of creating a set of organisational capabilities.

HR must begin constantly to seek the capabilities necessary for success. This can be achieved by using the following framing questions:

- What capabilities currently exist within the company?
- What capabilities will be required for the future success of the company?

- How can capabilities be aligned with business strategies?
- How can HR practices be designed to create the required capabilities?
- How can the accomplishment of the required capabilities be measured?

#### 6.3.4.2 SUCCESSFUL CHANGE

HR professionals within the JD Group must help the organisation to change by defining an organisational model for change and disseminating it throughout the company. The HR professional must also challenge powerful and successful executives to act according to their word (with regards to change).

HR professionals must facilitate the creation of a JD Group that responds faster to its competitors by learning to handle both predictable and unpredictable changes and thereby become a winning organisation.

#### 6.3.4.3 ATTRACTING, RETAINING AND MEASURING COMPETENCE AND HUMAN CAPITAL

Because of competition, securing human capital means upgrading the leadership bench. Leadership must be helped in the future within the JD Group to be team focussed, and shared rather than driven by a single person. Filling a leadership bench with new talent will require new leadership models. These leaders might not be in place today but they can be created and discovered for the JD Group.

Securing human capital also involves sharing ideas and information through the company. (Being a learning organisation). New policies and practices must be created that encourage such learning and the creation of a learning organisation and culture within the JD Group.

An organisation must be created in which intellectual capital is constantly updated. All metrics must be tied to organisational strategy in order to ensure that traditional measures of success (economic) are coupled to intangible measures (intellectual / people) capital.

### 6.3.5 STRUCTURAL CAPITAL: WORLD-CLASS/BUSINESS PERFORMANCE IMPROVEMENT/ DIFFERENTIATION

Structural capital that consists of organisational and customer capital as discussed in paragraph 2.4 in chapter 2 pose a big challenge when trying to implement an intellectual capital management tool.

In the future the JD Group must be assisted in creating models and processes for attaining world-class agility, effectiveness, and competitiveness, although within the context of underpinning and supporting a chain and the JD Group's differentiated position.

Effective world-class competition requires more than creating a product in a home market and shipping it as it is to new markets. It requires local innovation centers of excellence that draw on technologies invented in one locale and shared right throughout the organisation, rapid movement of products, people, information and ideas to meet local needs, and management of the paradox of economies of scale and local responsiveness. Thinking globally, but acting locally.

### 6.3.6 CUSTOMER CAPITAL: VALUE CHAIN FOR BUSINESS COMPETITIVENESS

Business practices must be refocused towards customers, community and the value chain (employees and suppliers) and less on transactional activities within the company. The shift to a customer focus will redirect attention from the company to the value chain in which it is embedded.

Business practices within the JD Group will consequently be applied to suppliers and customers outside the company. This will create training opportunities with a value-chain perspective and will weave suppliers, employees, and customers into value-chain teams.

### 6.3.7 FINANCIAL CAPITAL: PROFITABILITY THROUGH COST AND GROWTH

Each of the four main paths to growth, have people implications.

1. Growth through leveraging customers - induce customers to buy more products
2. Leveraging core competencies - unlocking latent potential.
3. Mergers, acquisitions or joint ventures; and
4. New business income stream development



No matter which route is selected, profitable growth will require rethinking organisation and decision-making tools so that growth aspirations can be realized through organizational actions.

The implications of profitability through growth raise new questions for business practices within the JD Group.

- How can business management create a commitment to rapid growth and the culture that supports it while simultaneously controlling cost?
- How can business management be sure that they hire people who can grow the business while reducing overall labour costs?
- How can business management create an organisational structure that provides both the autonomy needed for growth and the discipline needed to control cost?
- What are the intellectual capital implications of entering new businesses, of leveraging core technologies that lead into unfamiliar businesses, and of building the intimate customer relationship that bring an ever-increasing percentage of a customer's purchases to the JD Group?

It is an ongoing task of intellectual capital management to find new ways in conjunction with business management in designing and delivering organisational practices that deliver profitable growth.

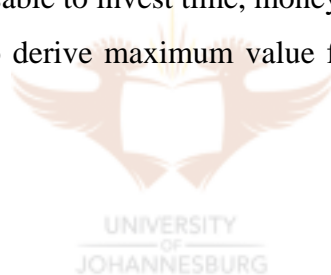
#### 6.4 AREAS OF FUTURE RESEARCH

- The study did not lead to conclusive results as to which tool contained in the scorecard method to be used in a retail company. Many references were made to the balanced scorecard throughout the study; however an in depth study could be undertaken to establish the effectiveness of the different tools used in the scorecard method.
- The study focused its attention mainly on the biggest furniture retail company in South Africa. Further comparative studies could be done to compare the status of intellectual capital management between competitive furniture retail companies in South Africa.

- The study did not investigate the results about the extent of intellectual capital management in retail companies outside the durables category in South Africa. Research should be done in the non-durables, semi durables and services categories in South Africa.
- As a follow up to the present study, further research should investigate the implementation of a single intellectual capital management tool in a retail company.

## 6.5 CONCLUSION

The primary objective of the study was to determine the status of the need for intellectual capital management in a retail company in South Africa. From the empirical study, a clear need was established to implement an intellectual capital management tool in the retail company. It was found that several elements of intellectual capital were already measured throughout the company. The significance of intellectual capital management for future excellence was comprehended, yet the relevant tools to interpret and share knowledge were not in place. It would be advisable to invest time, money and other resources to determine the appropriate tools at present to derive maximum value from intellectual capital management practices in future.



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## APPENDIX A

### INTELLECTUAL CAPITAL MANAGEMENT

### QUESTIONNAIRE

Name of Respondent -  
 Designation -  
 Department -  
 Educational level -  
 Length of employment -

1. In your opinion what are **the key internal drivers** (i.e. excluding macro environmental factors such as low inflation, low interest rates, etc.) of the future performance and growth of the JD Group? I ask that you rank these (internal) factors.
2. What in your opinion is the **relative importance** of aspects such as innovation, customer relationships, brand value and employee motivation etc. in driving the future performance and growth of the JD Group? Please motivate each response.
3. Do you think that the JD Group should measure its intangible assets? Please motivate your answer.
4. How would you propose that these intangible assets should be measured?
5. What considerations should shape or influence these measures?
6. How will you build a sound business case for the measurement of knowledge management? What considerations or criteria would you use in the JD Group?
7. What are the potential pitfalls?
8. Are **formalized routines** (e.g. process manuals, business processes) and informal routines (e.g. unwritten rules of behaviour / workflow) important to you?
9. How do you make sure all **business processes** are working **optimally**?
10. Do you think that JD's **patents, copyrights, trademarks, brands, trade secrets** etc are giving us a **competitive advantage**?
11. **How** do we know that?
12. Would it be helpful to **uncover** this hidden value?

13. **How** do you think that decision-making **patterns**, **value** systems and philosophies are **formed** in JD?
14. Would you say that there is a **need** to **communicate** the **policies** of the company more **clearly**?
15. How would it **improve** your work if a **shared framework** to interpret events existed?
16. What are the **methods** you use to **detect** and **correct errors** in your **area of work**?
17. Do you know of any **programs** that currently **measure** aspects like **customer** satisfaction, **employee** value, **innovation**, processes or company **culture**?
18. Do you think it would be useful to implement a single tool that would help to monitor performance, report to stakeholders and uncover hidden value of things that are difficult to measure with current processes and systems?

