CHAPTER 2 - LITERATURE REVIEW

Though your balance-sheet's a model of what a balance-sheet should be,
Typed and ruled with great precision in a type that all can see;
Though the grouping of the assets is commendable and clear,
And the details which are given more than usually appear;
Though investments have been valued at the sale price of the day,
And the auditor's certificate shows everything O.K.;
One asset is omitted-and its worth I want to know,
The asset is the value of the men who run the show.
- Archibald Bowman, 1938

2.1 Introduction

This study is conducted in the field of Organisational Behaviour and relevant literature has been reviewed which pertains to the issues related to the research problem, objectives and questions.

The focus of the literature review is to:

1 Provide background information regarding the principles of valuing Human Capital and how this relates to organisational behaviour in order to have a clear understanding of the concepts and techniques currently applied (if any);

2 Provide information and define what is meant by the "value" of Human Capital within growth organisations, within South Africa.

3 Provide information regarding the application of employee relations and employee value in growth-focused companies to identify the key levers for ensuring a return on investment in Human Capital in the knowledge-based 21st century.

4 Propose a framework to calculate the value of Human Capital for the organisation which can be included in Corporate Reporting.

The literature review also included investigating the field of Management Accounting and Corporate Reporting to ensure an understanding of the requirements for Generally Accepted Accounting Principles and Corporate Reporting.

2.2 Studies focused on HR Practices linked to business success

According to Mayo (2001), there is substantial research that has set out to study whether good people management practices are directly linked to parameters of business success.

A study in the UK sponsored by the Institute of Personnel and Development at Sheffield Business School and the London School of Economics looked at 110 manufacturing companies, and related a variety of supporting processes to profitability (Mayo, 2001). The researchers calculated that "employee commitment" accounted for 12% of the variation between companies in their profitability, and 17% in their productivity. Those firms with a strong human relations ethos showed more consistently good results than the others.

Mark Huselid (1995) of Rutgers University in the US, studied the relationship between a company's personnel policies and its business performance. He collected data from 968 firms related HR practices to attrition, productivity, and financial results. His analysis showed that one standard deviation in the "index of work practices" accounted for a 16% increase in productivity. Organisations that make development of their people a fully strategic goal performed much better than others (Mayo, 2001).

Jeffrey Pfeiffer of Stanford University, in his book The Human Equation (1998), argues for the "seven practices for successful organisations". These are listed as

1. Employment security,

2. Selective hiring,

3. Self-managed teams and decentralised decision making,

4. Comparatively high compensation linked to organisational performance,

5. Extensive training,

6. Minimal status differences, and

7. Extensive openness in sharing financial and performance information.

The Corporate Leadership Council, in conjunction with Coopers and Lybrand surveyed 1,500 companies on "high performance work practices," i.e. a range of HR systems and approaches. The findings were matched against criteria of business alignment and financial results. The researchers computed that each standard deviation improvement in their index of good HR systems led to an increase of $40,000 per employee in market value and $27,000 in sales.

Watson Wyatt, a firm of consultants, developed a Human Capital Index (HCI). They surveyed over 400 US and Canadian companies in 1999 and linked human resource practices with market value by tracking shareholder returns over a five-year period (Pfau & Kay, 2001). They found a strong correlation between their index, a consolidation of 30 key HR practices, and increases in shareholder value - acknowledging that correlations are not the same as direct causal links. Over five years the third of the sample showing the lowest index had risen 53% in market value, as compared with 103% for the upper third. The 30 practices were split into five groups. The figures shown in brackets below are the increases in shareholder value creation over the years associated with one standard deviation of improvement in that part of the Human Capital Index:

- Recruiting excellence (10.1%).

- Clear rewards and accountability (10.2%).

- A collegial and flexible workplace (3.8%).

- Communications integrity (5.0%).

- Prudent use of resources (–10.0%).

Note: Not all HR initiatives were found to be effective. The last category covered some popular HR initiatives, such as 360º assessment. Watson Wyatt (1999) concluded that undue investment was put into practices that in fact yielded very little benefit and could even be counter-productive. Importantly, the research found that there is a negative impact where the activity does not directly support the objectives of the organisation.

The European Foundation for Quality Management (EFQM) developed the EFQM Model in 1992, originally a model for quality management which is now often used as a monitor of organisational excellence. It balances "enablers" against "results," and comprises audit questions resulting in a set of scores placed against an ideal. The relevant areas for Human Capital are Leadership, People, and People Results. The latter is assessed through opinion surveys of people satisfaction.

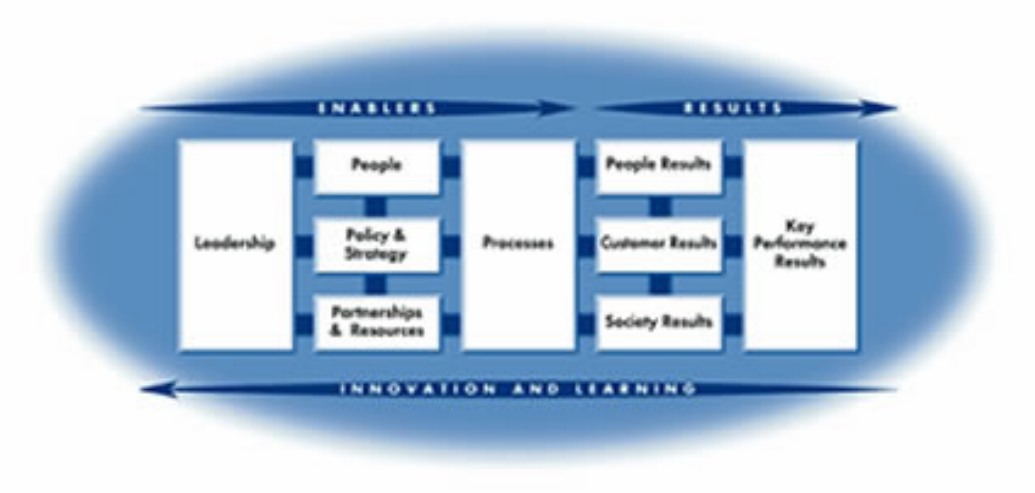

Figure 1: The European Business Excellence Model – EFQM Website: http://www.efqm.org (2005)

This model is closely related to the Malcolm Baldrige National Quality Awards in the USA. This has a series of criteria for performance excellence, in Business, Education and Health Care, aimed at:

- Ever-improving value to customers.

- Improved organisational effectiveness.

- Organisational and personal learning.

Seven categories are used and 1,000 points are distributed between them: 550 points are shared between Leadership, Strategic Planning, Information and Analysis, Customer and Market Focus, Human Resources Focus, and Business Results; the remaining 450 cover Business Results, with 80 allocated to Human Resource Results.

The Human Resource Focus covers:

- Works systems, aimed at high performance.

- Employee education, training, and development.

- Employee wellbeing and satisfaction (focusing on the work environment).

William Mercer, another leading specialist HR consultancy, has developed a "wheel" divided into six segments entitled "people" (capability and experience), "structure" (hierarchy and organisation), "processes" (how work is organised), "decision making," "information flow," and "reward." Concrete measures exist for each (Mayo, 2001). Changes that have happened in each sector over the previous three to five years are plotted on the wheel. These are then related to measures of performance and quality, such as added-value per employee, or another measure of productivity. In a large organisation, separate business units can be compared on the relationship between their success and their positioning on the sectors of the wheel.

A system which is known as Human Capital Appraisal™ was developed by three partners in Arthur Andersen (Friedman, Hatch & Walker, 1998), and consists of a matrix of systematic intervention steps vs. five HR areas of activity. The steps are: clarify, assess, design, implement, and monitor; and the areas of activity covered are:

- Recruitment, retention and retirement.

- Performance management and rewards.

- Career development, succession planning, and training.

- Organisation design.

- Human capital "enablers"—compliance, employee relations, communications, IT.

These two dimensions of steps and activities result in a 5 × 5 matrix that acts as an audit checklist for good Human Capital management practices. They also developed the Arthur Andersen's Fit-Cost-Value™ framework (see Figure 2 Fit-Cost-Value framework below).

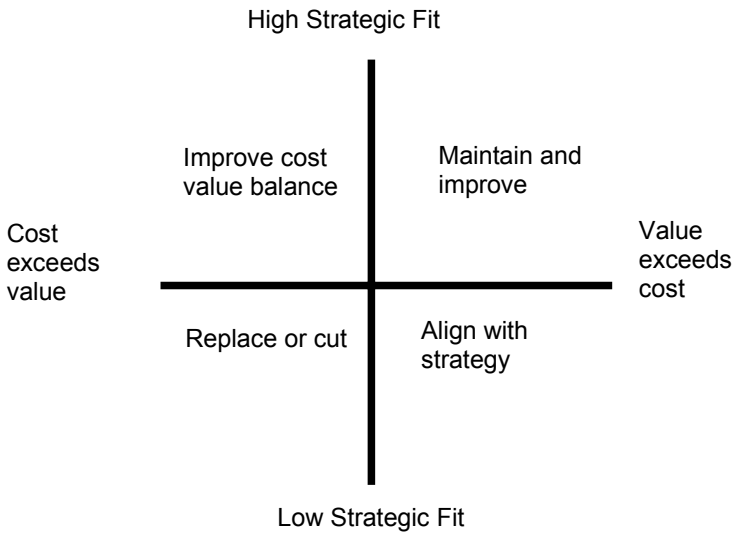

Figure 2: Fit–Cost–Value™ framework – Arthur Anderson (1998)

Each program or initiative is plotted on two dimensions of high/low strategic fit and cost > value/value > cost. "Strategic fit" rates each HR approach against business strategy, best practice, and (where relevant) the market. Value is determined by the consolidated impressions of employees in each of the five areas, very similar to employee satisfaction surveys. This model measures only the value to one stakeholder.

All the above approaches start with the structural capital of HR processes and initiatives and with the existing culture which makes them useful in benchmarking HR practices. This seems to prove that treating your Human Capital well yields good results and adding value effectively to employees as stakeholders add to the bottom line. These models, however, lack a focus on measurable outcomes

and focus rather on the existence of systems and processes which makes it virtually impossible to calculate a monetary value for including a line item on the company's balance sheet - one called Human Assets.

2.3 Key Theoretical Concepts

There are a number of different concepts which need to be understood to be able to define the scope of this research and the definition of what is known as Human Capital or Human Assets.

Key concepts are defined at the outset to ensure a common understanding. Some important concepts related to the study and/or similar to the concept of Human Capital have been identified in existing literature. As the study investigates a very complicated topic, or range of topics, in order to establish the framework, it is important to understand a number of theoretical concepts. In order to measure both the value of Human Capital and Human Assets, an understanding of the methods employed in measuring intangibles and the model for Intellectual Capital is required. Understanding reporting and financial statements, as well as methods to value assets is of key importance. The following is a list of the key methods for measurement (discussed later in this Chapter). The concepts are depicted in Table 1.

Company Reporting	Elements of Financial Statements
	Reporting Non-Financial Measures
	Reporting (Accounting) for Human Capital
Measuring Human Capital	Human Capital ROI
	Human Capital Index
	Best Investment in Human Capital
	Balanced Scorecard
	HR Scorecard
Measuring Intellectual Capital	Intellectual Capital (IC) Index
	EFQM Excellence Model
	Economic Value Add (EVA)
	Scorecard Methods (SC)
Measuring Intangibles	Direct Intellectual Capital Methods (DIC)
	Market Capitalisation Methods (MCM)

	Return on Assets (ROA)
	Skandia Navigator / Intangible Assets Monitor
Valuing Assets	Cost Based Methods
	Market Based Methods
	Income Based Methods
	Calculated Intangible Value Method
Measuring Human Assets	Individual Human Asset Worth
	Collective Human Asset Worth

Table 1: Key Methods / Models for measurement

2.3.1 Invisible (Intangible) Assets

Invisible assets have been defined as the flow of information between the company and the environment, or inside the company that creates invisible assets (Roos, Roos, Edvinsson & Dragonetti, 1997). These assets are semi-fixed; i.e. they need to be built over a long period of time, can be employed for more than one use at a time and are enhanced by increased use. As such, they provide a source for competitive advantage.

Because of the reluctance of banks to lend for investment in intangible assets, the development of intangible assets is mostly self-financed (Morey, Maybury & Thuraisingham, 2000). In other words, the invisible assets are matched on the financing side of the balance sheet by equally invisible finance, most of which in the form of invisible equity.

Knowledge organisations like Deloitte and Touche, Microsoft, Morgan & Banks or WM-data have little typical assets (machinery) other than their employees, thus they are both the minders of the

machines and the “machines” (revenue creators) themselves. For the most part, their competence is directed outwards, to the task of generating revenue, by solving customers´ problems.

These employees create the relationships, networks, and image that comprise the organisation’s external structure. Similarly, it is the smaller amount of human competence that is directed inwards that creates, maintains, develops (or erodes) the organisation’s internal structure and processes. As can be seen in Figure 3, it is the intangible assets that make up the biggest part of the value growth for companies, not the financial capital.

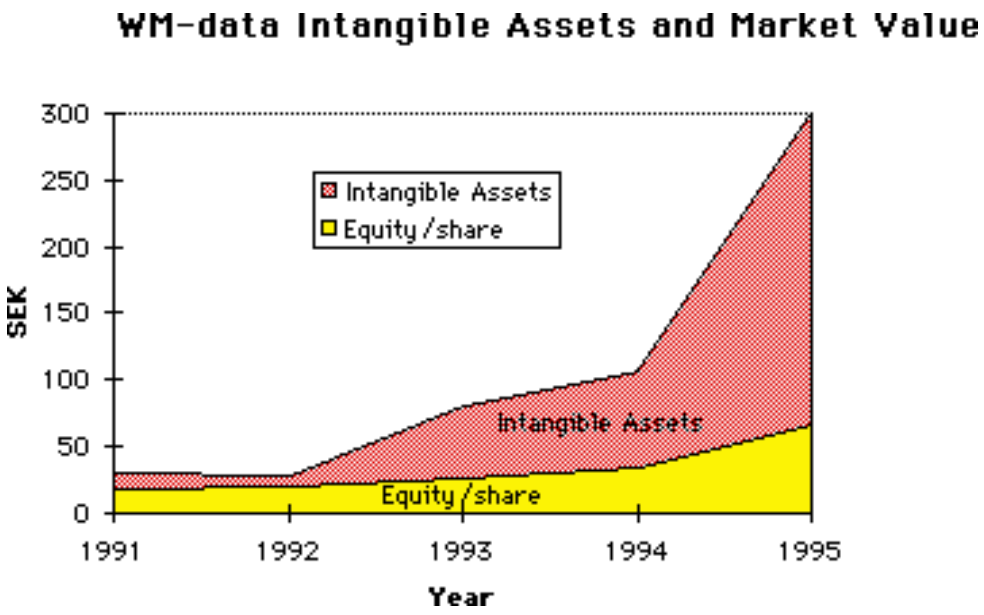

Figure 3: WM-data Intangible Assets per share - WM-data Annual Report (1995)

WM-data uses traditional indicators like return on equity and return on investment only at group level. In their WM-data’s Annual Report of 1997 (as referenced by Sveiby, 1998) they state that “Traditional financial controls are of limited use in managing, understanding and assessing a knowledge-based company. This requires more in-depth analysis of the knowledge-based company’s critical business targets and concepts”. WM-data adopted the original Konrad theory for measuring and presenting in their Annual Reports.

A theory about measuring intangible assets was developed by a Swedish working group in 1987 and published in a report in Sweden (Sveiby,1998). The “Konrad theory” has since become widely used

in Scandinavia. More than 40 Swedish companies measured and reported their intangible assets according to these principles according to Öhman (Sveiby, 1998).

2.3.2 Intellectual Capital (IC)

Consensus on the definition and measurement of Intellectual Capital (IC) seems lacking in the academic literature. The definitions include not just human brainpower, but also brand names, trademarks. Assets booked at historic costs and transformed into greater value over time are also defined as Intellectual Capital. Further definitions include factors such as technology leadership, on-going employee training, and even customer relationships. This all implies that Intellectual Capital is a large field; however the difference between perceived value and accounting value is still open to debate.

The OECD (Organisation for Economic Co-operation and Development) defines Intellectual Capital as the economic value of two categories of intangible assets of a company - organisational and Human Capital (OECD, 1996). Nahapiet and Ghoshal (1998:245) state that Intellectual Capital refers to the "knowledge and knowing capability of a social collectivity, such as an organisation, intellectual community, or professional practice". Black, Wright, and Bachman (1998) argue that Intellectual Capital is a factor that includes Human Capital, social capital and organisational capital. Gratton and Ghoshal (2003) argue that Intellectual Capital is part of Human Capital; that is, Human Capital subsumes Intellectual Capital, and also includes within it social capital and emotional capital. For most commentators however, such as Kaplan and Norton (1993), Harvey and Lusch (1999), and Sveiby (1997), Intellectual Capital is very broad and includes Human Capital as one of its key dimensions.

It is important to understand that Intellectual Capital should not be equated to Employee Value Add or Human Capital Value, although some of the measures and calculations may have a relevancy in quantifying Human Capital assets. In the publication, Intellectual Capital, IC is defined as a knowledge-based; i.e. a personal, subjective process, emerging from previous experiences and current events (Roos et al., 1997a).

For the purposes of this study, Intellectual Capital is defined to include all the processes and the intangible assets of an organisation which are not normally shown on the balance sheet including trademarks, patents and brands.

2.3.3 Human Capital (HC)

The term 'Human Capital' was first used by Nobel Laureate, Theodore W. Schultz, (Schultz, 1961). The term is today most frequently used to refer to a combination of skills, experience and knowledge in the Human Resources within an organisation. Human Capital makes an individual potentially productive and thus equips him or her to earn income in exchange for labour.

Human Capital is thus an all-encompassing term for the knowledge, skills, competencies and other attributes embodied in individuals or groups of individuals acquired during their life and used to produce goods, services or ideas in market circumstances.

Roos & Roos (1997b) categorise and define Human Capital as follows:

- **Competence.** Essentially about knowledge and skills. Knowledge meaning specifically the "technical or academic knowledge of things," related to education, i.e. something that "has to be taught."

- **A skill is** the practical counterpart of competence.

- **Attitude.** Depends mostly on personality traits and cannot be changed much. It is influenced by "motivation, behaviour and conduct."

- **Intellectual agility.** Covers innovation, flexibility, and adaptability-traits seen at a group or organisational level as much as in individuals.

Note: This approach is reflected in many of the measures used by the pioneering Scandinavian companies.

Sveiby (1997) uses the term "professional competence" for Human Capital. This he defines as a combination of educational attainment levels and years of experience. He then breaks it down, as for the other components of Intellectual Capital, into aspects of growth/renewal, efficiency, and stability; defining his overall framework for measuring Intellectual Capital components.

Gary Becker, a Nobel Prize-winning economist includes personality, appearance, reputation and credentials to the mix. This work, based on detailed empirical analysis, redressed the prevailing assumption that the growth of physical capital is paramount in economic success (Becker, 1994). In reality, physical capital explains only a relatively small part of the growth of income in most countries' GDP.

Rastogi (2000:196) stated "The concept and perspective of Human Capital stems from the fact that there is no substitute for knowledge and learning, creativity and innovation, competencies and capabilities; and that they need to be relentlessly pursued and focused on the firm's environmental context and competitive logic".

For the purposes of this study, Human Capital is defined as the sum of knowledge, skills and abilities possessed by a company's employees, working as a network of knowledge resources; i.e. it is the value inherent in an organisation's people. It includes employees' collective skills, experience, talent, knowledge, intellectual agility and behaviour.

2.3.4 Human Assets

Assets may be classified in many ways. Assets can be defined as the right kind and quality of "equipment" to carry out the production process as efficiently as possible (Lovemore and Brummer, 1993). In a company's balance sheet certain divisions are required by generally accepted accounting principles (GAAP), which vary from country to country.

In business and accounting, an asset is anything owned (or rented/leased i.e. under it's control) which can produce future economic benefit, whether in possession or by right to take possession, by a person or a group acting together (e.g. a company), the measurement of which can be expressed in monetary terms. Assets are listed on the balance sheet. It has a normal balance of debit. Similarly, in economics an asset is any form in which wealth can be held.

The various types of assets defined in accounting and economics includes (Anon, 2006):

Current Assets - cash and other assets expected to be converted to cash, sold, or consumed either in a year or in the operating cycle. These assets are continually turned over in the course of a business during normal business activity.

There are 5 major items included into current assets:

1. **Cash** - it is the most liquid asset, which includes currency, bank deposit, and negotiable instruments (e.g., money orders, checks, bank drafts).

2. **Short-term investments** - include securities bought and held for sale in the near future to generate income on short-term price differences (trading securities).

3. **Receivables** - usually reported as net of allowance for uncollectible accounts.

4. **Inventory** - trading these assets is a normal business of a company. The inventory value reported on the balance sheet is usually the historical cost or fair market value, whichever is lower. This is known as the "lower of cost or market" rule.

5. **Prepaid expenses** - these are expenses paid in cash and recorded as assets before they are used or consumed (e.g. insurance).

The phrase *net current assets* (also called working capital) is often used and refers to the total of current assets less the total of current liabilities.

Fixed assets - Also referred to as PPE (property, plant, and equipment). These are assets which are purchased for continued and long-term use in earning profit in a business. This group includes land, buildings, machinery, furniture, tools, wasting resources (timberland, minerals), etc. They are written off against profits over their anticipated life by charging depreciation expenses (with exception of land which increases in value). Accumulated depreciation is shown in the face of the balance sheet or in the notes. These are also called capital assets, especially when intangibles are taken into account.

Intangible assets – These lack physical substance and usually are very hard to evaluate. They include patents, copyrights, franchises, goodwill, trademarks, trade names, etc. These assets are (according to US GAAP) amortised to expenses over 5 to 40 years, with the exception of goodwill.

Other assets - a high variety of assets, most commonly:

- Long-term prepaid expenses.
- Long-term receivables.
- Intangible assets (if they represent just a very small fraction of total assets).
- Property held for sale.

In a lot of cases this section is too general and broad, because assets could be classified into any of the four above categories. In conclusion, an asset can be defined as having potential to earn revenue, its value is managed over life cycle, and its failure leads to irrecoverable commercial loss.

Human Asset is a new term for the knowledge economy where professionals are not in a problem-solving mode but in an opportunity-creation state. For the knowledge economy, achievement is not the term; and contribution is the key to success. Human Assets can assure that. The use of the term in the modern neoclassical economic literature dates back to Mincer (1958), an economist, who pioneered the way in an article “Investment in Human Capital and Personal Income Distribution”.

Becker’s (1994) view is that Human Capital is similar to the “physical” means of production, e.g., factories and machines, one can invest in Human Capital (via education, training, medical treatment) and the income depends partly on the rate of return on the Human Capital you own. Thus Human Capital is a stock of assets a company owns, which allows one to receive a flow of income, similar to interest earned.

The concept of Human Capital can be infinitely elastic, including immeasurable variables such as the personal character or connections with insiders (via family or fraternity). This allows the theory to be true without explaining anything (Anon, 2006). Often it is not the education or training that one has which determines the value of one's education, but the prestige of the qualification or degree received. Someone who gets a qualification from a university will likely get a higher income than one from a technikon or technical college, even if they have exactly the same knowledge and the ability to apply the knowledge in the same or similar manner. Similarly, discrimination against certain cultures or female employees implies different rates of return.

According to Becker (1994), the Human Capital literature often distinguishes between "specific" and "general" Human Capital. Specific Human Capital refers to skills or knowledge that is useful only to a single employer (and who will likely be willing to pay for it), whereas general Human Capital (such as literacy) is useful to all employers. Likewise, the value placed on specific Human Capital due to their skills possessed may be worth more in one organisation than in another; e.g. an IT technician's value may be higher within an IT organisation than in an organisation where IT is purely a back office support function.

2.3.5 Value Based Management

Value Based Management (VBM) is used by many companies as a strategy method for organisations wanting to create value for all stakeholders. This integrated approach aligns the objectives, strategy, management processes and people of an enterprise to continually enhance value. In organisations where Value Based Management has been adopted, mention is made of the employee value elements, but measurement is represented in intangible aspects. Integration of the performance measurements and alignment of compensation and systems are explored although very little specific literature on these topics is available.

Clear shareholder value approaches from an accounting as well as economical models have been explored and measurements evaluated and clearly defined. Likewise, methods for calculating customer value from retention, growth (with existing customers) and acquisition (new customers) has been explored, proven and implemented with success.

Black et al. (1998) explain why shareholder value is so important when the market looks at a firm's performance, and why mastering valuation has become an essential skill for managers whenever

they make strategic decisions. They go on to explain how a framework of shareholder value can integrate the core business process of creating, preserving and realising value with techniques that can be customised across markets and sectors.

The term Value Based Management describes a management orientation explicitly toward value. It's about aligning the people, processes and systems of an organisation to continuously increase shareholder value. Because value, as represented by the share price, is set by the market, and because the market is more concerned with the future than the past, value-based management has to deal with perceptions as well as reality. It has two distinct tasks; to actually improve performance by being more effective and efficient, and to convince the market of the promise of this activity in terms the market will understand and believe.

Market prices are tied to expectations rather than to past accomplishments. This is the difference between performance (historical) and valuation, which is about the market's expectation of future performance

Many papers have been written relating to the topic of Value Based Management, mostly focusing on risk, financial performance, economic value add (EVA), metrics, scoreboard, financial incentives, creating and even destroying asset value. Value profiling assesses the value creation in business units or value centres against an economic profit measure such as Cash Flow Return on Investment (CFROI).

For the purposes of this study, the broad practices of Value Based Management (VBM) are considered as follows:

- Committing to value creation goals.

- Re-examining the role played by the corporate centre.

- Developing value maximising business strategies.

- Driving operational value.

- Broad-based rewards aligned with value creation.

- Building a value culture.

- The changed behaviour is more important than the metric.

- Changing the mindset will change operational and strategic thinking.

- Definite need to challenge entrenched thinking.

- Creates the burning platform for moving from incremental improvement / thinking.

To create value for their shareholders, companies must earn returns on invested capital that exceed the cost of capital. Each metric may have its own distinctive advantages and disadvantages, and each is expressed in its own distinctive way. Yet at their most basic level, they are all designed to measure management's success in achieving this aim.

The business imperative of VBM is to create value for all stakeholders in an organisation. Customers offer loyalty, patronage, and money for products and services that provide good value based on the combination of price and quality relative to competitive offerings. An organisation earns profit and market share if it keeps customers satisfied and loyal and generates customer value.

Equally important is the value that employees offer an organisation. As stakeholders, they give their time, commitment, and creativity. In return, they expect fair compensation, a challenging work environment, and the opportunity to learn, develop, and advance. As a result, the organisation enjoys loyal, productive, innovative employees who help build a competitive advantage.

2.3.6 Employee Relations Management Solutions

The development of an Employee Relationship Management (ERM) concept by software and consulting houses was driven by the imperative to maximise employee performance and manage

Human Capital more effectively. As companies faced many people management challenges, there was a need to develop an approach to address people management challenges and maximise returns on employee investment.

The value to shareholders is not the only measure of success for an organisation. Employee satisfaction has been measured and shown to have a direct influence on the growth of organisations. In a study by Doorley and Donovan (1999), it was found that when measuring a client's overall employee satisfaction index in a company which had slipped well below it's growth potential (2%), the employee satisfaction index was very low. After committing to growth, their employee satisfaction index grew from 100 to 160 and their growth to 13%. By 1997, they were growing at 18% with employee satisfaction in the 170 range (Doorley and Donovan, 1999).

The e-Human Resources landscape includes a range of solutions, from e- enablement of critical HR functions to development of enterprise portals (Anon, 2003). All solutions can be carried out as a standalone initiative or in combination with other ERP solutions. As companies look to maximise return on their people management initiative investments and tackle more than one issue simultaneously, delivery of an integrated set of solutions is often the choice. One of the reasons provided for the fact that integrated solutions yield higher returns is because they affect more than one lever (i.e. Operating Margin, Revenue and Asset Management) of shareholder value.

Often it is the absence of a strategic approach to people initiatives that leads to process dispersion and misalignment, which prevent companies from maximising the effectiveness of their people management initiatives. One of the key advantages of an integrated solution vs. an isolated people management initiative is that an integrated solution can streamline and integrate uncoordinated efforts to improve efficiency and reduce costs across several processes simultaneously.

The limitation of this model is the quantification of the value back to bottom line tangible benefits. The focus is on logical activities or processes and methods of ensuring that these are done and the data of such activities recorded - the limitation being the fact that these systems are transactional and not interpretive.

For purposes of this study, an integrated solution is a system that enables the maximisation of return on Human Capital, using integration to improve efficiency and reduce costs across several processes simultaneously.

2.4 Company Reporting

Le Clerc et al. (1996) describe the objective of company corporate reports as "a method to communicate economic measurements and information about the performance of the organisation to the stakeholders of the organisation"

- Financial reporting includes the basic financial statements and accompanying notes.

- Business reporting encompasses the broader information provided by companies, including management's discussion and analysis, information provided in the annual report, presentations to analysts, fact books, and business information provided on the company's website.

The aim of all accounting information is to provide the particular user with relevant and timely data to make decisions (Mott, 2005).

1 **Shareholders** of limited companies will be influenced in their decision to remain investors or to increase/decrease their holding by receiving information about the financial performance and financial position of their company. This usually occurs twice a year in the form of a profit and loss account and a balance sheet relating to the first half-year and, later on, the full year.

2 **Owner-managers** of non-incorporated businesses will require the above information but they will also be privy to more detailed and more frequent information about the business's financial affairs.

3 **Management** in companies range from director level down to supervisor level. Each person requires accounting information to help them in their roles.

4 **Suppliers** need to assess the creditworthiness of potential and existing customers when setting the amount and period of credit allowed.

5 **Customers** also need to be reassured, in this case to minimise the risk of their supplies drying up and disrupting their own output. Firms entering into a joint venture will also need mutual reassurance. Similar checks to those outlined above for suppliers will need to be carried out.

6 **Employees** and their **representatives** have a vested interest in the financial health and future prospects of their employer. They rely on an assessment of the published accounts by experts for this.

7 **Government** levies tax on the profits earned by businesses and value added tax on the sales value of most industries. Tax authorities rely on the information provided by companies for these purposes.

8 **Competitors** can make some comparisons; for example, sales per employee, from published accounting data in a process known as benchmarking.

9 **Lenders/Investors** need to be assured that their capital is safe and that the borrowing company can service the loan or overdraft adequately, so again the financial statements of profit and loss account and balance sheet will be examined from this viewpoint.

It can be concluded from the above that most users of accounting information are drawing from what is provided in the published accounts. Only management has access to more detailed, non-published financial information within a company.

The content of the annual report and accounts for a listed company, i.e. one that is quoted on a stock exchange, is more comprehensive than the requirements of unlisted companies which reduce in line with their size. Disclosure requirements of listed companies derive from three sources:

1. Statutory law embodied in Companies Acts;

2. Accounting standards as laid down in FRSS and SSAPS (Statements of Standard Accounting Practice); and

3. Listing regulations specified by the Stock Exchange.

The following main items are disclosed in the annual report and accounts:

- **Chairman's statement** –a broad review of progress, changes in strategy and management and a guide to future prospects. This may be supplemented by a chief executive's review of each individual business's performance.

- **Operating and financial review** – a detailed commentary on the financial results and influential factors.

- **List of directors** – details of service, responsibilities and other directorships.

- **Directors' report** – a formal report on specific required items; e.g. dividend declaration, principal activities, share capital and substantial shareholdings, political and charitable contributions, directors' shareholdings, employment policy, creditor payment policy, close company status and appointment of auditors.

- **Report of the remuneration committee** – policy statement on how the total remuneration package of executive and non-executive directors is set.

- **Auditors' report** – a statement of auditors' responsibility and their report on whether or not the financial statements give a true and fair view of the state of affairs.

- **Financial statements** – comprising consolidated profit and loss account, balance sheet, cash flow statement, statement of total recognised gains and losses and parent company balance sheet only.

- **Notes to the financial statements** – additional breakdown and analysis of figures appearing in the main financial statements.

- **Historic record of financial performance** – a 10-year summary of the main financial figures and ratios reflecting profitability, dividends and shareholders' funds.

- **Notice of meeting** – notice of the time and venue of the annual general meeting and the business to be conducted

According to Standard 38 (1998) of the International Accounting Standards Committee (IAS) for the measurement and amortisation of intangible assets and purchased goodwill, an intangible asset is defined as "an identifiable non-monetary asset without substance held for use in the production or supply of goods and services, for rental to others, or for administrative purposes." The fair value of an asset is the amount for which that asset could be exchanged between knowledgeable willing parties in an arm's-length transaction.

IAS 38 was published in 1998 to be applied from 1 July 1999. The areas covered are advertising, training, start-up, and R&D. The "asset" has to be identifiable and controlled; its cost has to be measured reliably, and it has to be one that is expected to generate future economic benefits to the organisation, otherwise it must be treated as an expense. This standard prohibits internally generated goodwill, brands, publishing titles, customer lists, and similar items. The standard insists that the asset should normally be amortised over the best estimate of the useful life, with a maximum of 20 years. This is not possible for human assets and as such, the latter cannot be considered as an intangible asset according to the definition by the IASC.

2.4.1 Elements of Financial Statements

Financial statements (or financial reports) are a record of a business' financial flows and levels. Typically they will include:

- A *balance sheet* (statement of Financial Position) setting out the net asset position of a business.

- An *income statement*, income and expenditure statement or *profit and loss statement*.

- A *cash flow statement*.

- A *statement of other recognised gains and losses* or *other comprehensive income statement* setting out movements in equity that do not go through the income statement or profit and loss account (e.g. a revaluation of the value of head office of a manufacturing company).

- *Statement of retained earnings*.

- Supplementary notes and management discussion.

According to the World Bank (1995), the Financial Accounting Reporting and Auditing Handbook (FARAH) states that a good financial information system is vital for a strong management information system. It further states that an independent audit of financial statements provides faith and credibility to stockholders, members and third parties.

The elements of financial statements from IASC (International Accounting Standards Committee) that provide a framework for the preparation of financial statements include transactions and other events by grouping into broad categories the elements of the financial statement of companies. According to this body "elements may be classified by their nature or function in the business of the enterprise in order to display information in the manner most useful for the purposes of making economic decisions" (The World Bank, 1995).

Generally Accepted Accounting Practice Statements AC000 defines three elements which measure the wealth of an entity (Everingham and Kleynhans, 1995):

- Assets;

- Liabilities; and

- Equity.

Assets definition: A resource controlled by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise. Future economic benefits include cash from goods sold, or cost savings from using more efficient machinery. Legal ownership is not a requirement for recognition as an asset; i.e. permitting certain "leased" resources to be shown as assets by the lessees.

Some assets are not disclosed in a balance sheet. Internally generated goodwill, including the value of brands, never appears in a balance sheet. The value of the Human Capital (workforce), probably any firm's most valuable asset, does not appear at all in a balance sheet.

Liability definition: A present obligation of the enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits.

Equity definition: The residual interest in the assets of the enterprise after deducting all its liabilities.

When talking about a set of accounts, one refers to the profit and loss account statement and the balance sheet statement. A balance sheet is a snapshot picture at a moment in time. On the one hand it shows the value of assets (possessions) owned by the business and on the other, it shows who provided the funds with which to finance those assets and to whom the business is ultimately liable. An income statement is a profit and loss account, which compares income with expenses consumed in the same period.

The Financial Reporting Standard (FRS No 3) issued in 1992, and entitled Reporting Financial Performance, requires companies:

- To separate turnover and operating profit between continuing operations, acquisitions, and discontinued operations;
- To disclose profits and losses resulting from restructuring/reorganisation or from the disposal of fixed assets or parts of the business;
- To disclose extraordinary items (which should now be a rare event) as opposed to exceptional items (which could be quite commonplace);
- And to calculate earnings per share after taking them into account.

Although the rules differ in different countries, usually larger companies and all publicly-quoted companies must have their financial statements independently audited. Note that the auditors do not certify financial statements, that is done by the company's directors. All an auditor does is examine the financial statements and records of a company and assess whether they do indeed show a "true and fair" view (or meet other particular requirements that the auditor is engaged to opine on).

2.4.2 Reporting Non-Financial Measures

Individual investors take reliability of information sources into account when using information. Investors adjust their reliance on information for the incentives and prior accuracy (Maines, 1996; Williams, 1996; and Hirst, Koonce & Miller, 1999) and as such, the investors' use of non-financial performance measures will depend on their own perception of the reliability of the source of that information.

The literature provides both support for and caution against mandating disclosure of non-financial performance measures. Non- financial performance measures considered relevant measures are predictive (leading indicators) of future financial performance and appear to be reflected in share prices and stock returns. Additionally, there is evidence that non-financial performance measures can enhance the value of financial measures due to interactive effects between the two.

Various researchers and students of Human Capital have called for more disclosure of non-financial information by corporations (Norton, 2000; Eccles, Herz, Keegan & Phillips, 2001; and Lev, 2001). These individuals argue that traditional financial measures have diminished in relevance due to changes in business models and are backward looking, rather than providing insights into a company's future performance. However, questions regarding the reliability, comparability and consistency of the information - factors which are of utmost importance when valuing an organisation.

While non-financial measures are industry-specific, the value of non-financial performance measures can depend on both environmental (e.g. regulatory) factors and firm-specific factors, such as firm strategy and product development and life cycles. These findings suggest that investors likely need firm- and time-specific models to make full use of non-financial measures. However, evidence indicates that managers tend to have difficulty specifying the relation between non-financial measures and future financial performance; thus, corporations may be unable (and

perhaps unwilling for competitive reasons) to provide such models to investors or the general public which may include competitors.

If non-financial measures are subject to significant measurement error, regression analysis would probably fail to find a significant relation between non-financial measures and future financial performance. Survey evidence from Wm. Schiemann and Associates (as reported by Ittner and Larcker, 1998) suggests that corporate executives have concerns about the quality of non-financial information; particularly measures related to human assets, which are viewed as intangible. These executives also perceive the quality of financial information to be higher than that of non-financial information.

A related issue is the effect of an external audit of non-financial performance on investors' perceived reliability of this information. Investors and the general public generally consider audited information to be more credible than unaudited information (Libby, 1979; Pany and Smith, 1982; Johnson, Pany & White, 1983). The conclusion which can be drawn from this is if non-financial performance measure disclosures are audited, investors' perceived reliability of and reliance on this information likely would increase.

Research indicates that different formats for reporting financial performance measures can influence professional and non-professional investors' use of that information by affecting the transparency of information and particularly, of the links between performance measures influences analysts' use of this information.

2.5 Measuring Shareholder Value

For publicly traded companies, investors tend to look at *total shareholder return* as the ultimate measure of success. This is the change in share price from the date of purchase, plus any dividends received, divided by the original cost of the shares. For other types of companies, such as the public sector, the notion of value comes down to the overall governing objective of the organisation and how that organisation defines success.

In financial terms, shareholder value can be thought of as *market capitalisation* (current share price x the number of shares outstanding), an important measure for categorising companies at a single point in time.

Buy-side investors (who actually drive share prices) typically value companies the same way one would value a bond—on the basis of expected future cash flows. Unlike bonds, the expected cash flows from a business are much more difficult to predict. Estimates have to start with the value of existing assets and current, actual financial results. Then one has to forecast the level of future investments and make assumptions about the company's ability to maintain or increase the return on those investments. Investors are interested in short-term results because they inform the forecast and, along with other criteria, they are quantified benchmarks for measuring a company's progress toward stated goals.

Investors continually hone their forecasts. To do this they want to hear details about what the company is actually doing to grow returns and the capabilities that they are building to allow them to sustain their business models. Positive guidance, based on the clear alignment of business strategy and specific actions, points the way forward. If one does not give investors a reason to believe, they won't. Transparency is about providing enough information so investors can decide *if* they want to invest and, if so, *at what price*. A lack of transparency — in historical results or in what the company is saying about the future — raises a red flag, and investors are likely to respond by lowering their forecasts (and, therefore, what they're willing to pay for the stock today).

This means, the better the available information, the lower the "transparency discount" i.e. transparency is less a burden imposed by regulators and more an opportunity to increase share price.

2.5.1 Enterprise Value Map (EVM)

The Enterprise Value Map (EVM) is a method developed by Deloitte as a graphical representation of the connections between key drivers of value (such as revenue growth, margins and asset turns) and the processes and tactics that affect those value drivers. This unified display allows the analysis of what the company *can* do, which initiatives may be most important, and how value is created allowing organisations to perform the following (Wortman, 2005):

- Structure and prioritise improvement initiatives, showing the relationship between tactics, strategies, objectives and value.

- Communicate strategy and how it is to be implemented, as well as the interconnections between various initiatives.

- Render insight for all stakeholders, internal and external, about what is being done, and why.

Business leaders today are continuously faced with increased scrutiny and pressure to enhance shareholder value. Investors are becoming more and more demanding, forcing companies to focus their attention on strategies and processes that add value to the shareholders.

From an executive perspective, the Enterprise Value Map is a framework depicting the relationship between the measures by which companies are evaluated and the means by which companies can improve those measures. Starting with the drivers of enterprise value, the methodology addresses those aspects companies can address to influence those drivers, depicting not only what companies can do categorically, but also how they can drive improvement at tactical levels. "Value Drivers" are the metrics by which shareholders, analysts and potential investors assess company performance - in absolute terms and relative to that of competitors (Wortman, 2005).

The EVM is at the top most level, made up of those components of the Income Statement and Balance Sheet. Revenue Growth and Operating Margin sections are the Income Statement portion of the map (these sections combine to describe a company's current operational performance) and the Asset Efficiency section is a subset of the Balance Sheet, showing how efficiently a company uses its assets in delivering its operational performance.

The expectations section addresses factors that influence future Income Statement and Balance Sheet performance.

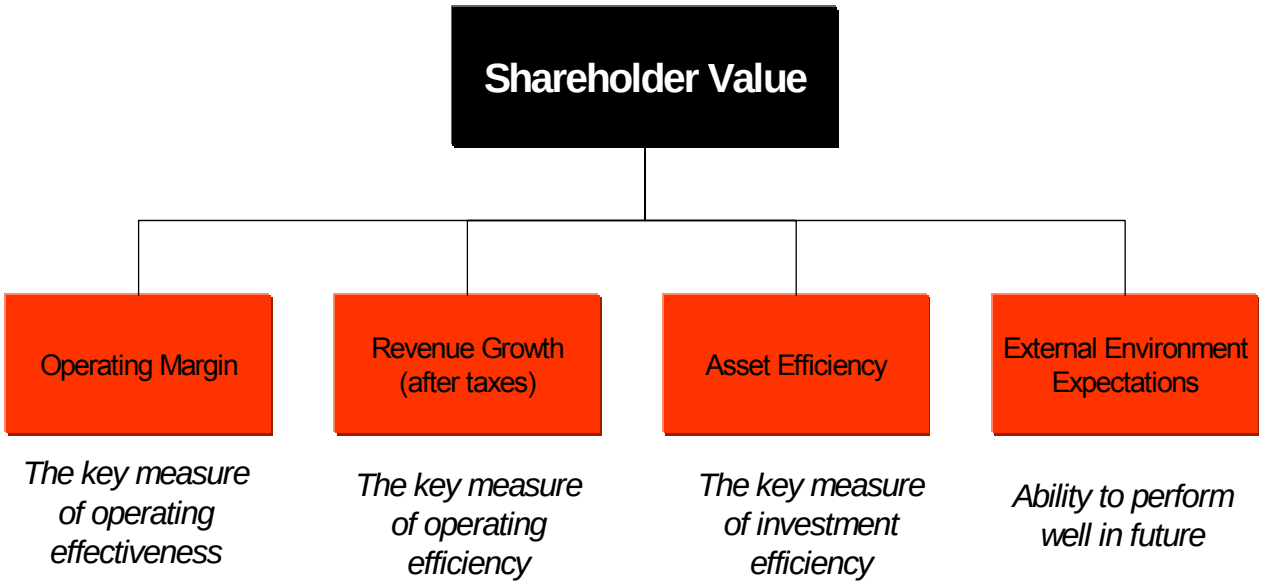

Figure 4: Shareholder Value Map, adapted from Deloitte (2003)

Revenue Growth and Operating Margin represent the Income Statement and combine to describe current operational performance. The Asset Efficiency section is a subset of the Balance Sheet, showing how efficiently assets are utilised in delivering operational performance. External Factors address factors that may influence future Income Statement and Balance Sheet performance, i.e. factors that influence shareholder confidence in the organisation and its leadership.

2.6 Reporting (Accounting) for Human Capital

The accounting standards setting authority has included in their standards those relating to the operating and financial review of a company. In other words, information that stakeholders can use to project the historical figures into the future, including the company's vision and strategy as well as information on the intangible assets such as Human Capital.

The chief issue within Human Capital accounting (HCA) is that human assets, unlike capital assets, have a largely uncertain future service life. Measuring the value of Human Resources has therefore been concerned with the nature of the uncertainty and providing estimates of this, with a number of measures used, including the discounted future compensation model (Lev and Schwartz, 1974) - where the value of an employee is the present worth of their remaining earnings from employment, and the replacement cost method, where "costs incurred by recruiting, selecting, compensating, and

training employees reflect the expected value of successful job performance" (Steffy and Maurer, 1998: 273).

Flamholtz (1985) stated that measuring an individual's value to the firm is founded on the notion that it is not the individual *per se* who is valuable, but the individual in relation to the roles he/she plays that is crucial.

2.6.1 Universal (Best Practices) Approach

"Best practices" or "high performance work practices" emphasise the need for strong consistency among HR practices (internal fit) in order to achieve effective performance. This view has a high degree of empirical support (Huselid, 1995; Delaney and Huselid, 1996; Arthur, 1994; and MacDuffie, 1995) and has been championed by Pfeffer (1998) who listed 15 HR practices in 1994 which became seven in 1998:

1. Employment security;

2. Selective hiring;

3. Self-managed teams;

4. High compensation contingent on performance;

5. Training;

6. Reduction of status differentials; and

7. Sharing information.

Arthur (1992 and 1994) found that HR practices focused on enhancing employee commitment (e.g. decentralised decision-making, comprehensive training, salaried compensation, and employee participation) were related to higher performance. Conversely, he found that HR practices that

focused on control, efficiency and the reduction of employee skills and discretion were associated with increased staff turnover and poorer manufacturing performance. Similarly, in a study of high performance work practices, Huselid (1995) found that investments in HR activities such as incentive compensation, selective staffing techniques and employee participation resulted in lower turnover, greater productivity, and increased organisational performance through their impact on employee skills development and motivation.

What the view shows is that where more of the high performance HRM practices is used, the better the performance as indicated by productivity, turnover or financial indicators. Although support for this view seems to exist, there are notable differences as to what constitutes a "best" practice. The requirement is to look past the talk and terminology being used to be able to see the value creation in Human Capital.

2.6.2 Reporting Human Capital Measures

According to Huselid (1995), there are two major issues with Human Capital measures:

1. There is no common framework for reporting that goes beyond historical measures (e.g. cost of selection, or training) to "more detailed information on workforce quality".

2. Many firms lack databases and audited information that can give strong and relevant information to investors.

Developing a consistent and coherent internal HR architecture on Human Capital measurement is a necessary condition for effective external reporting. The three factors that explain why companies do not report more on Human Capital (Stiles and Kulvisaechana, 2002) are:

- The fear of competitors - anxiety over whether Human Capital information is competitively sensitive;

- The fear of unions or employees; that is, concern that providing too much information may restrict the organisation's flexibility (and worries over legal issues arising); and

- A concern for practical difficulties of collecting Human Capital information to present for reporting, and whether investors will understand it anyway.

2.7 Measuring Human Capital

Although measuring Human Capital has many different aspects to it, the demand for more information and transparency by stakeholders, the demand from shareholders for comparable information on the company's strategies and prospects, plus the competitive pressures where the clear advantage for growth companies is that of their Human Capital, makes it extremely important to report on Human Assets as part of the company's reporting framework.

The employee or Human Resources quadrant on a company's scorecard is often the most likely to include meaningless metrics, unrelated to the bottom line of a company. This could be largely due to the fact that HR or the "people part" of the business does little to tell them about the value and performance of this asset. Various researchers and consultants have developed models in an attempt to calculate the value of the employee, and this study explores some of these models below, as it may pertain to the results and recommendations for reporting.

Gratton (2000) developed a causal model linking people and the financial health of companies:

Figure 5: Gratton's Causal Model - Gratton (2000)

Guest, Michie, Conway & Sheehan (2003) shows a preference to adopt a stakeholder perspective, which "would give some emphasis to performance outcomes of concern to the range of stakeholders". These outcomes, Guest et al. argues, should reflect employee attitudes and behaviour, internal performance (productivity and quality of goods and services); and external indicators, such as sales and financial performance. In other words, a number of potentially related outcomes that extend beyond a narrow definition of business performance based on just financial indicators should be assessed.

In the literature, research has tended to focus, in terms of outputs, on employee turnover, productivity, and financial performance. The difficulty in relying on just the company's performance is that, apart from ignoring important other measures just outlined, it may be that within organisations, and business units there are different objectives (Delaney & Huselid, 1996). Some may be focused on market share, others on profit, and the HR practices may not be the same in both. If research is at an organisational level, rather than at a business unit level, such differences may reflect in a poor linkage between Human Capital and unit performance (Becker and Gerhart, 1996). Guest et al. (2003) also point to the problems in variations of accounting practices between countries, which may render comparisons in financial performance problematic.

The adoption of a stakeholder perspective reflects the concern of having multiple measures of performance outcome. This perspective is supported by the popularity of the "balanced scorecard" concept (Kaplan and Norton, 1993), which is intended to weigh the interests of various stakeholders. According to Kaplan and Norton, attention should be given, not just to traditional financial measures, but to people, processes and customers.

2.7.1 Human Capital ROI

Fitz-Enz (2000), suggests a Human Capital Income Statement, which incorporates the costs of the processes for managing Human Capital and relates them to the financial value added for the organisation. He also takes account of the "hidden costs" of lost time and money through attrition, unwanted learning curves and other waste. This model looks at the Human Capital side and does not seem to make provision for the increase / decrease in the value of the Human Assets.

REVENUE		
Human capital value added	$2665	*Revenue less nonhuman expenses*
DIRECT EXPENSES		
Acquiring	15	*Cost of hiring*
Maintaining	1128	*Pay and benefit cost*
Developing	12	*Cost of training*
GROSS INCOME	1510	
INDIRECT EXPENSES		
Vacancy costs	126	*Revenue lost for, say, jobs unfilled*
Learning curve	438	*Revenue lost for partial productivity during first year of employment*
NET INCOME	946	

Figure 6: A Human Capital Income Statement Fitz-End (2002)

Another model for the calculation of ROI comes from the Corporate Leadership Council in the USA (2002). This model focuses on the actual intervention(s) offered by HR and works as follows:

Calculate all the costs of the intervention, including the time of specialists and participants, then multiply the number of employees participating by:

- The percentage of the job related to performance changes
- The performance change (in standard deviations)
- The value of one standard deviation in performance
- The duration of performance gain in x number of years

Then subtract the costs and divide the result by the costs to give return on investment.

The cost lines in this statement may not be 100% accurate; however, this approach has considerable merit because it defines the financial cost of maintaining Human Capital in relation to the financial value added it produces.

2.7.2 Human Capital Index (HCI)

The contribution of Human Capital to aggregate productivity growth is important, but uncertainty remains about its magnitude and calculating the effect on the bottom line in real monetary terms. Brown (1999) developed two models he calls the Simple Human Capital Index and Complicated Human Capital Index.

2.7.2.1 Simple HC Index

This index is made up of four sub-metrics:

- Number of years in the business / field.
- Level in the company (by job/grade or organisational chart level).
- Performance rating.
- Number and variety of positions / assignments held.

Each of these four factors is weighted, based on their relative importance. Each individual is then given a score based on these factors. This index may tell a company about the strength of a team and the entire workforce, and provide a method to calculate the true loss of a key person to turnover.

The limitation of this index is that it does not take into consideration the potential of the individual, whilst the advantage is that it is relatively simple and easy to understand and administer (Brown, 1999).

2.7.2.2 Complex HC Index

This index takes into consideration the level of competency or skills mix and first weights the two dimensions of skills/competencies vs. experience/performance. This weighting could be different for

companies wanting to acquire new skills vs. a company who is concerned with having seasoned employees.

Skills and competencies are categorised in technical and non-technical and these are then rated according to the person's level of proficiency in each area. The overall Human Capital score for each employee is then calculated by taking the competency score multiplied by the weight and the experience score multiplied by the weight (Brown, 1999).

2.7.3 Best Investment in Human Capital (BIHC)

Best Investment in Human Capital (BIHC) provides a framework for Human Resources to move from a soft-skill business to one based on hard-skill measurement (Weiss, 1999). "Best" reflects comparative analyses of the company's current investment performance versus external standards. "Investment" refers to the change in treating the money and effort spent on developing HC as an investment rather than cost. "HC" refers to the money and effort it takes to cultivate people and their talent, reflecting the economic value of the knowledge, skill, experience and innovations of people in the company to be productive and competitive (Weiss, 1999).

2.7.4 Balanced Scorecard (BSC)

The Balanced Scorecard (BSC) was not designed specifically to measure and publish intangible assets, only to take a more "balanced view" on internal performance measurement. The objectives and the measures of the scorecard are derived from an organisation's vision and strategy and thus complement the financial measures of past performance with measures of the drivers of future performance.

The Balanced Scorecard (Kaplan and Norton, 1996) seeks to align the evaluation of Human Capital to the company's strategic aims under four headings:

1. Financial success (to succeed financially, how should we appear to customers?)

2. Customer success (to achieve our vision, how should we appear to customers?)

3. Operational success (to satisfy our shareholders and customers, at what business processes must we excel?); and

4. Learning and growth (to achieve our vision, how shall we sustain our ability to change and improve?)

Kaplan and Norton distinguish between outcome measures (which they term “lag measures”) and performance drivers (termed “lead measures”), and emphasise that a good scorecard should have a mixture of both. Although organisations may have hundreds of performance measures scattered through the various functions, they are frequently unconnected with the financial outcomes that govern decisions at the top level.

The Balanced Scorecard does not specifically focus on people - it is implicit that each of the four sets of outcomes is generated by them. However, some company applications have changed the name of the learning and growth perspective to “employees” or “people”. Kaplan and Norton (1996) did include in these perspective two sets of people performance drivers, as follows.

- **Employee capabilities**

In this area, three outcome measurements are identified as:

1. Employee satisfaction.

2. Employee retention.

3. Employee productivity.

Driven by the following enablers:

- Staff competence.

- Technology infrastructure.

- The climate for action.

- Motivation, empowerment, and alignment.

The outcome measures described here are:

- Measures of suggestions made and implemented.

- Measures of improvement (in processes).

- Measures of organisational and individual alignment (this refers to individual and team goals being consistent with and supportive of the overall business goals).

Kaplan and Norton (1996) state that they can supply fewer examples of company-specific measures the human capital (people) perspective compared to the financial, customer and internal process perspectives in their balanced scorecard.

Becker et al. (2001) argue that Human Capital is the foundation of value creation based on the fact that up to 85% of a company's value is based on intangibles, and propose an adaptation of the Balanced Scorecard called HR Scorecard (discussed next). As the BSC achieves its purpose to balance the traditional (financial) perspective by adding the three other perspectives, there could, in principle, be many more perspectives.

2.7.5 HR Scorecard

The HR scorecard (Becker et al., 2001) seeks to link HR policies and practices to the firm's strategic aims and values via analysis and measurement of essential workforce outcomes, employee behaviours, workforce competencies, workforce costs and investments and cultural attributes.

The model recognises the importance of both intangible and tangible assets, as well as of financial and non-financial measures. It also acknowledges the complex, value-generating connections among the firm's customers, operations, employees, and technology, and integrates HR's role in an unprecedented way. The model highlights the important distinction between lagging and leading indicators. Lagging indicators, such as financial metrics, typically reflect only what has happened in the past. Such metrics may accurately measure the impact of prior decisions, but they won't help one to make today's decisions, nor do they guarantee future outcomes.

REVENUE		
Human capital value added	$2665	*Revenue less nonhuman expenses*
DIRECT EXPENSES		
Acquiring	15	*Cost of hiring*
Maintaining	1128	*Pay and benefit cost*
Developing	12	*Cost of training*
GROSS INCOME	1510	
INDIRECT EXPENSES		
Vacancy costs	126	*Revenue lost for, say, jobs unfilled*
Learning curve	438	*Revenue lost for partial production during first year of employment*
NET INCOME	946	

Figure 7: Transforming the HR Architecture into a Strategic Asset - Becker et al. (2001)

Becker et al. (2001) list a Seven-Step Model for Implementing HR's Strategic Role with a strong focus on designing a Strategic HR Measuring System.

- **Step 1: Clearly Define Business Strategy**

At the strategy-development "table," senior HR leaders provide an essential perspective. The key is to state the firm's goals in such a way that employees understand their role and the organisation knows how to measure its success in achieving them.

- **Step 2: Build a Business Case for HR as a Strategic Asset**

Once a firm clarifies its strategy, HR professionals should be able to build a clear business case for why and how HR can support that strategy, showing the high-performance work system that has a distinct, positive influence on a firm's financial performance.

The business case for a strategic HR role must also incorporate HR's key influence on strategy implementation and the role of strategically focused measurement systems.

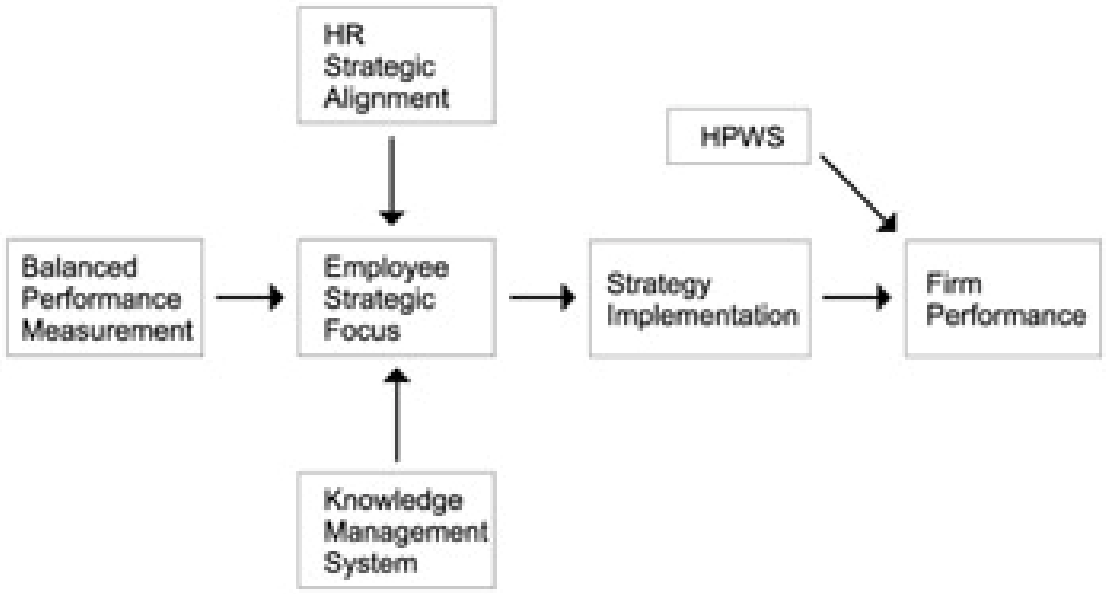

Figure 8: HR and Strategy Implementation - Becker et al**. (2001)**

- **Step 3: Create a Strategy Map**

Clarifying the firm's strategy sets the stage for implementing that strategy. To define the value-creation process, the top- and mid-level managers who will be implementing the firm's strategy should develop a strategy map to represent the firm's value chain, asking the following questions:

- Which strategic goals/objectives/outcomes are critical rather than "nice to have"?

- What are the performance drivers for each goal?

- How would progress toward these goals be measured?

- What are the barriers to the achievement of each goal?

- How would employees need to behave to ensure that the company achieves these goals?

- Is the HR function providing the company with the employee competencies and behaviours necessary to achieve these objectives?

- If not, what needs to change?

A strategy map of the value-creation process contains hypotheses, or predictions, about which organisational processes drive firm performance. Normally, a company validates these hypotheses only after achieving targets on performance drivers and observing the impact of these results on firm performance.

- **Step 4: Identify HR Deliverables within the Strategy Map**

HR creates much of its value at the points of intersection between the HR system (rewards, competencies, work organisation, etc.) and the strategy implementation system. Maximising that value requires an understanding of both sides of that intersection.

- **Step 5: Align the HR Architecture with HR Deliverables**

Evaluate how the HR system (rewards, competencies, work organisation, etc.) can be structured so as to provide those deliverables i.e. bottom up.

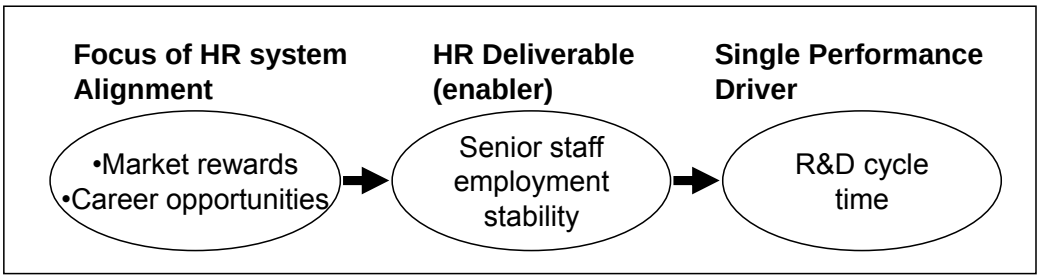

Figure 9: Intersection of HR with Strategy Map - Becker et al**. (2001)**

- **Step 6: Design the Strategic HR Measurement System**

Steps 1 through 5 guide the development of the HR architecture and lay the groundwork necessary to measure the HR-firm performance relationship. In Step 6, the actual design of the HR measurement system takes place. To measure the HR-firm performance relationship with precision, valid measures of HR deliverables need to be developed.

1. Choose the correct HR performance drivers and enablers. This requires comprehension of the causal chain for effective strategy implementation of the organisation.

2. Choose the correct measures for those deliverables and measure those variables accurately.

Becker et al. (2001) go on to illustrate the measurement choices facing HR professional Figure 11 below).

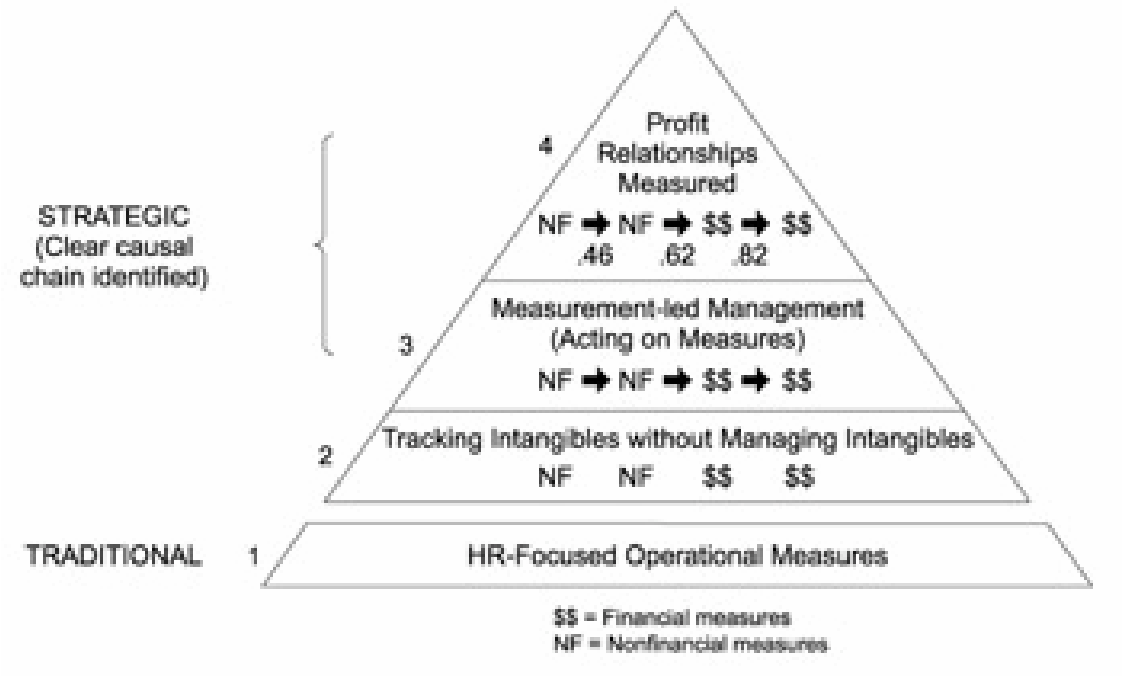

Figure 10: The Creation of Employee Strategic Focus through Increasing Measurement Sophistication - Becker et al**. (2001)**

Most HR measurement systems fall in the traditional category, or Stage 1. These include operational metrics such as cost per hire and activity counts. The gap between Stages 1 and 2 in the diagram symbolises the substantial divide between strategically and operationally focused HR measurement systems.

In the second stage, HR measures have the aura of strategic import, but they do little to validate HR's role as a strategic contributor. If companies declare their "people" measures, such as employee satisfaction, as having strategic value, and these metrics are used in the reward system, there is a "balance" between financial and non-financial measures, but there is no consensus about how these variables serve to implement strategy. There is therefore no strategic logic linking these measures together.

Stage 3 is a key transition point. The firm includes non-financial measures (among them HR measures) in its strategic performance measurement system. In addition, it locates each measure within a strategy map - assisting HR to legitimately track HR's contribution to firm performance.

In Stage 4, HR measurement systems let the firm estimate the impact of HR policies on firm performance. If the firm's value chain is short, the company can gauge the full impact of HR on overall performance. In organisations with more complex value chains, estimates of HR's influence may be limited to segments within the chain.

- **Step 7: Implement Management by Measurement**

Once the HR Scorecard is developed, and if the Scorecard is aligned with the imperatives of the firm's strategy, HR professionals will have new insight into what it takes to actually manage HR as a strategic asset.

According to Becker et al. (2001), implementing a new management process based on the work done in Steps 1 through 6 requires considerable change and flexibility, and the process is not just a one-time event. Human resource executives must regularly review the HR deliverables they've defined in order to be sure that these drivers and enablers remain strategically significant. This is particularly true for HR enablers that have direct links to specific business objectives. Some questions arise:

- How many HR professionals can build business cases to support a company strategy?

- What is the profile and competence of the HR professional to support such measures?

Research is required to identify the extent of this competency among HR professionals. Skilled HR managers understand when an enabler is no longer playing a strategic role and needs to be replaced (Becker et al., 2001).

2.8 Measuring Intellectual Capital

Intellectual Capital (IC) is concerned with accounting for the firm's future prospects in an organisational mode. It is concerned with laying out the competencies which represent drivers of growth as potentialities (Brooking, 1997; Edvinsson & Malone, 1997; Johansson, 1998; Johansson et al., 1998; Roos et al., 1997a; Roslender, 1997; Stewart, 1997; and Sveiby, 1997). It is not concerned with the growth found in present markets, technologies and products, but it is rather focused on mobilising internal, foundational capabilities and competencies useful for growth in a

long-term perspective (cf. Hamel and Pralahad, 1994; Roberts, 1998; and Wernerfeld, 1984). Here, organisational capabilities and competencies constitute the specific bases - organisational routines - for competitiveness built up over a long period of time and realised in a multitude of products and technologies over time. Growth and value creation are not a matter of particular products and markets but of the broad organisational knowledge, unique to a firm, which allows it constantly to adapt to changing conditions.

A few models have been developed to measure Intellectual Capital.

2.8.1 Intellectual Capital (IC) Index

An IC statement is a set model; not a set calculation that arrives at a digit for the worth of a firm's intellectual capital. IC includes employees, organisation, and customers for a possible extended reporting on a firm's situation beyond the narrowly financial measures typically reported on.

Tangible assets, albeit important, are not decisive. More important is the "value of the talented people" that are valuable because they are part of an organisational system. Such a competence theory (Grant, 1996) suggests that organisational competence is gradually built and historically forged, and always placed in the uneasy position between discursive and tacit understanding of organisational rules of conduct. It directs attention to internal processes within the firm and not merely to external markets and competition.

The IC index is a second generation model that attempts to consolidate all the different individual indicators into a single index and correlate the changes in Intellectual Capital with changes in market value. This index was developed by Johan and Göran Roos who concluded that because it was so difficult to measure Intellectual Capital itself, the focus should be on measuring changes (Roos & Roos, 1997b). To this end they developed the IC-Index tool.

2.8.2 EFQM Excellence Model (EFQM)

The EFQM Excellence Model is a non-prescriptive, self-assessment approach, developed as a framework for assessing applications for the European Quality Award (ECEDG, 2000). It uses nine criteria covering

1 Leadership;

2 Policy and strategy;

3 People;

4 Partnerships and resources;

5 Processes;

6 Customer results;

7 People results;

8 Society results; and

9 Key performance results.

Points are allocated based on assessment of results, approach, deployment and assessment and review.

2.8.3 People Value Add (PVA)

Kunath (2003) said that "people value" drives all economic value added, and HR functions are high on his list of those organisational units that have not "sold" their true importance within most organisations. To meet the challenge of measuring the value added by people, a ratio, People Value Add (PVA), has been defined as the Economic Value Add (EVA) divided by the capitalised value of employee costs. It recognises that financial value is ultimately dependent on Human Capital.

2.8.3.1 Economic Value Add (EVA)

Economic Value Add (EVA) is a comprehensive performance measure that uses the variables of capital budgeting, financial planning, goal setting, performance measurement and incentive compensation to account for all the ways in which corporate value can be added or lost, and

concentrates on changes in value as a result of new projects. It has been applied to Human Resource measurement by the Saratoga Institute, deriving metrics from the key drivers of value for the organisation.

EVA = Net operating profit after taxes (NOPAD) - Capital x Cost of Capital.

The capital charge is the most distinctive and important aspect of EVA. Under conventional accounting, most companies appear profitable but many in fact are not. As Drucker (1995:1-9) stated in a Harvard Business Review article, "Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind that it pays taxes as if it had a genuine profit. The enterprise still returns less to the economy than it devours in resources... Until then it does not create wealth; it destroys it". EVA corrects this error by explicitly recognising that when managers employ capital they must pay for it, just as if it were a wage.

EVA, relating profits or cash flow to tangible assets, capital employed or equity, defines that only by focusing on tangible flows are shareholders guaranteed that management will create "shareholder value". EVA is generally used and accepted in industry as a measure for Human Capital and has been used by Fitz-end (2000). This involves deriving metrics from the key drivers of value for the organisation. Examples of these metrics include: Revenue per Employee; Employee contribution to critical outputs (process), and the effectiveness of HR within the organisation.

This method is internally focused and does not report on Human Assets, rather on HR specific indices; i.e. best ways to manage the Human Asset. The EVA approach from finance relies heavily on discounted cash flow to evaluate the net present value of a capital project. If the return on capital is greater than the cost of capital, then value is created and the project should be implemented. This financial theory of capital will be used as a model from which to develop the measurement of Intellectual Capital. According to Robinson and Kleiner (1996), this financial project evaluation approach, which relies on value creation, should be applied to all of the internal processes of the value chain.

2.9 Measuring Intangibles

As Human Capital may be considered as an intangible asset, an understanding of the methods used to value intangibles is required. When researching the measurement of intangibles, it was found that

suggested measuring approaches for intangibles fall into at least four categories of measurement. The categories are an extension of the classifications suggested by Luthy (1998).

1 Human Capital

2 Customer Capital

3 Organisational Capital

4 Intellectual Capital

Intangible assets are a broader category than Human Capital and include aspects such as Intellectual Capital, copyright, brands, customer service and company image. Human Capital is thus seen initially as one element of a sub-set of intangibles as defined by Arthur Anderson (Group, 1998).

Measuring Intangible Capital has been approached in various manners - some of which are briefly described below:

Direct Intellectual Capital Methods (DIC)

This method estimates the Rand value of intangible assets by identifying its various components. Once these components are identified, they can be directly evaluated, either individually or as an aggregated coefficient.

Market Capitalisation Methods (MCM)

This method calculates the difference between a company's market capitalisation and its stockholders' equity as the value of its Intellectual Capital or intangible assets.

Return on Assets (ROA)

This method uses the average pre-tax earnings of a company for a period of time, divided by the average tangible assets of the company. The result is a company ROA that is then compared with its industry average. The difference is multiplied by the company's average tangible assets to calculate an average annual earning from the Intangibles. By dividing the above-average earnings by the company's average cost of capital or an interest rate, one can derive an estimate of the value of its Intangible Assets or Intellectual Capital.

The above categories are an extension of the classifications suggested by Luthy (1998) and Williams (2000), and have been applied for various situations; e.g. the methods offering $-valuations, such as ROA and MCM methods. These are useful in merger and acquisition situations and for stock market valuations.

The following figure provides a graphical illustration of the various Intangible Assets measuring models. Details of those considered most important by the researcher are provided thereafter.

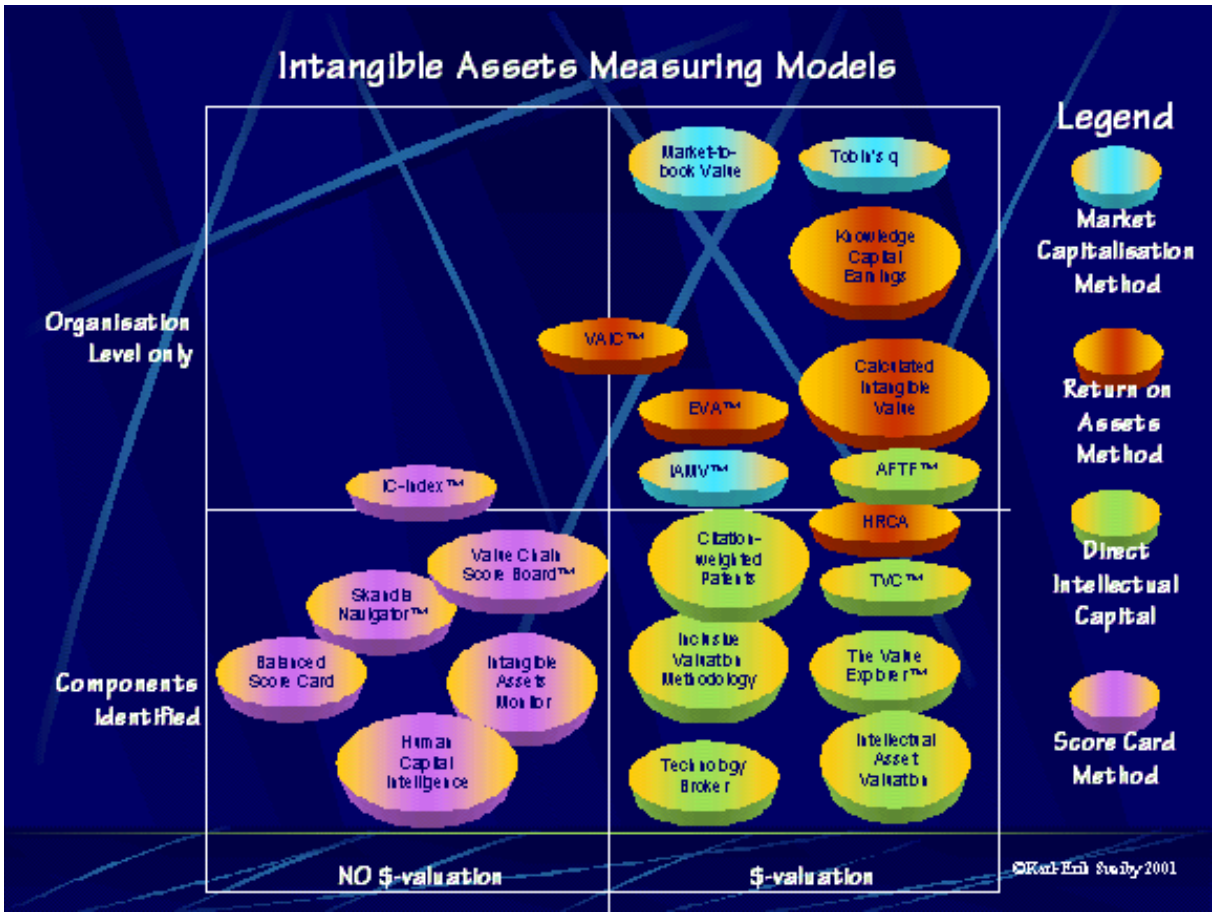

Figure 11: Invisible Assets Measuring Models - adapted from Sveiby (1997)

2.9.1 Skandia Navigator / Intangible Assets Monitor

The Skandia Navigator, pioneered by Leif Edvidsson (Anon 1992) is a collection of critical measurements that aim to provide a balanced view of performance and goal achievement. This monitor is considered by the researcher as the most comprehensive of all the Intangible measures. It is based on identification of critical indicators under five perspectives linked to the value creation process:

1 Financial focus

2 Customer focus

3 Process focus

4 Renewal and development focus and

5 Human focus

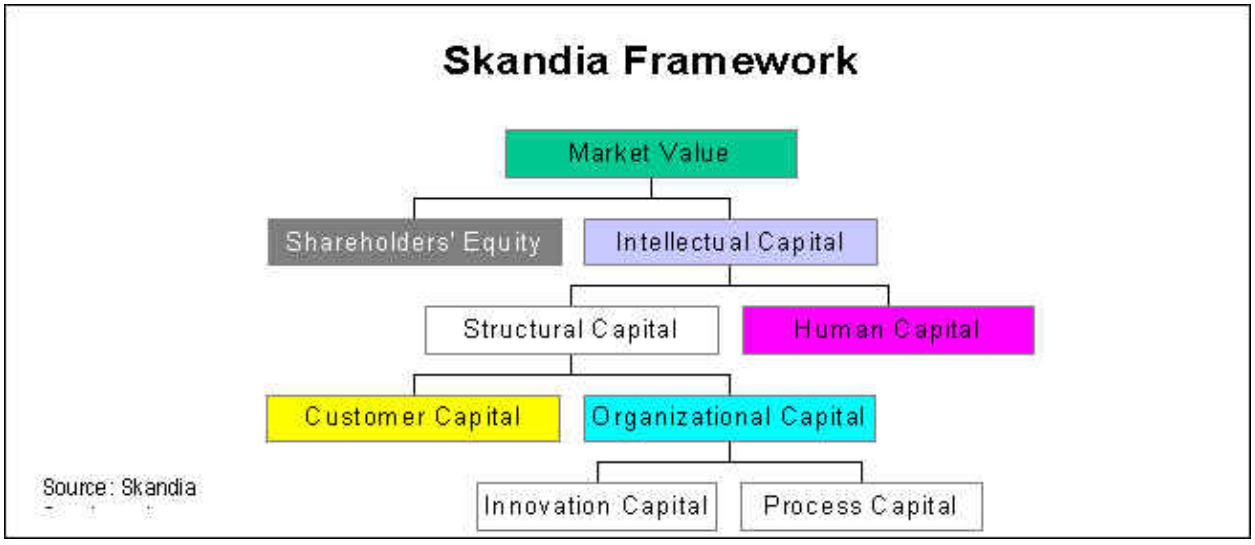

Figure 12: Skandia Framework – Edvidsson (in Anon, 1992)

The Intangible Assets Monitor is based on the notion of people as an organisation's only profit generators. The profits generated from people's actions are signs of that success, but not the originator of it. Human actions are converted into both tangible and intangible knowledge "structures" (Mayo, 2001). These structures are directed outwards (external structures) or inwards (internal structures). These structures are assets, because they affect the revenue streams.

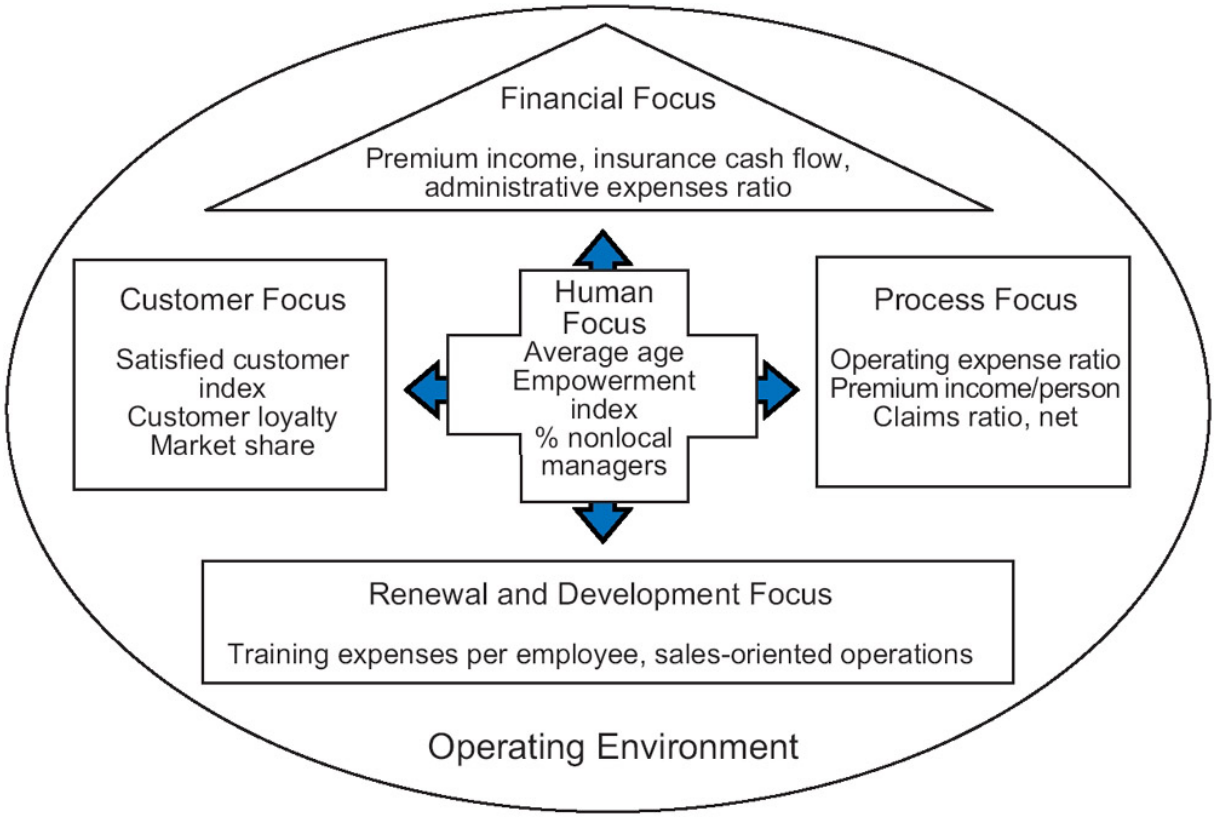

Figure 13: Intangible Assets Monitor - Mayo (2001)

The Intangible Assets Monitor assumes a set of three Intangible Assets, and proposes that one should try and find metrics indicating the growth, renewal, efficiency and stability of these assets. The idea is to get a "peek" into how the Intangible Asset(s) are developing, by designing indicators that correlate with the growth of the asset in question, its renewal rate, how efficiently it is being utilised, and the risk of loosing it.

The following figure illustrates the HCM as proposed by Mayo (2001).

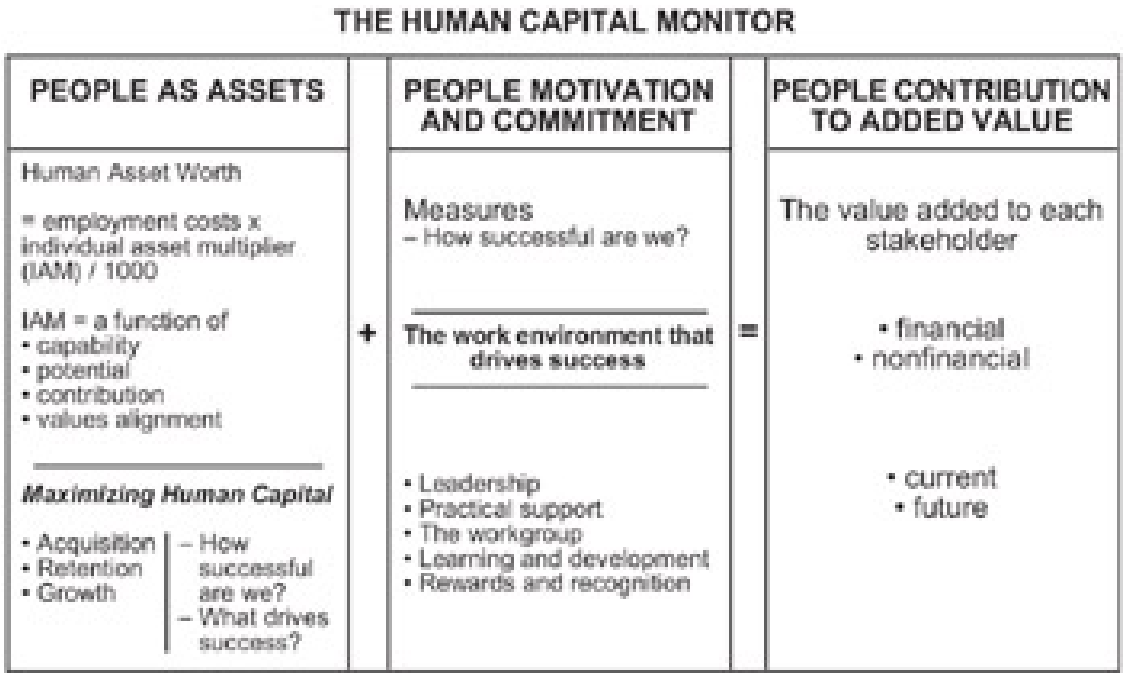

Figure 14: Human Capital Monitor – Mayo (2001)

Sveiby (1997) recommended having only one or two measures in each box. He uses the term "employee competence" for Human Capital, and he confines this to "professionals". This seems appropriate for totally knowledge-based companies such as consulting firms, but could overlook the very real added value provided by others.

Sveiby's (1997) leverage effect is a formula that looks at the effect of the firm's own professionals in generating revenue, in the context of all the Human Capital available.

The formula is as follows:

$$\text{Profit per Professional} = \frac{\text{Profit}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{\#employees \& freelancers}} \times \frac{\text{\#employees \& freelancers}}{\text{Number of professionals}}$$

General efficiency factor		Sales efficiency factor		Personnel efficiency factor		Leverage indicator

Equation 1: Sveiby's leverage effect formula – Sveiby (1997)

Under the "internal structure" category several measures relating to Human Capital are included:

- Proportion of support staff to total employees (efficiency).
- Sales per support person (efficiency) .
- Values and attitudes (efficiency).
- Age of the organisation (stability).
- Support staff turnover (stability).
- "Rookie ratio"- number of people with less than two years' employment (stability).

Sveiby (1997) compares the Balanced Scorecard with the Intangible Assets Monitor. He notes that there are clear similarities between the non-financial areas of focus and their links to the strategy of

the firm. The two were developed independently, but both recognise the importance of intangible assets.

2.10 Valuing Assets

Invisible assets are the key drivers of shareholder value in the knowledge economy, but accounting rules do not acknowledge this shift in the valuation of companies. Statements prepared under GAAP do not record these assets. GAAP covers such aspects as revenue recognition, balance sheet item classification and outstanding share measurements. Companies are expected to follow GAAP rules when reporting their financial data via financial statements.

There are a number of methods generally accepted and applied in valuing the assets of a company. These traditional methods include:

- **Cost based methods** - these method typically look at acquisition or replacement cost.

- **Market based methods** - this method uses the price to be paid in an open market.

- **Income based methods** - this method uses the cash streams to be expected into the organisation related to the contribution of the Human Asset, calculated as the present value of the expected net cash flows.

Flamholz (1999) states that the aim of Human Resource management is to optimise Human Resource value. He defines the measure of individual value as resulting from two interacting variables: a person's conditional value and the probability that they will stay with the organisation. An individual's conditional value is the present worth of the potential services that could be rendered if they stay with the organisation for x number of years. The conditional value is a combination of productivity (performance), transferability (flexible skills), and promotability. The latter two are heavily influenced by the first element. This is then multiplied by a probability factor that the individual will stay for the x number of years. This gives the expected realisable value, which is a measure of the person's worth. Flamholz (1999) extends the principle to evaluating the effectiveness of development programmes. If a programme produces a measured change in

productivity, transferability, or promotability, this translates into an increase in the value of the individuals concerned.

There are a number of difficulties with this approach, not least of which is the estimation of potential future services. It also leads to lower values for older and more experienced people who have less time to render future services. There is a case for looking at them this way if one considers value over a future lifetime, but it fails to take account of the wealth of value in past experience.

2.10.1 Calculated Intangible Value Method (CIV)

This method overcomes drawbacks of the market-to-book method of valuing intangibles, which simply subtracts a company's book value from its market value and labels the difference. Because it rises and falls with market sentiment, the market-to-book figure cannot give a fixed value of Intellectual Capital. CIV examines earnings performance and identifies the assets that produced those earnings. In many cases, CIV also points to the enormity of the unrecorded value. The formula is as follows:

- **Step 1:** Calculate average pre-tax earnings for a period e.g. three years.
- **Step 2:** Use the average year-end tangible assets for the same period.
- **Step 3:** Calculate the return on assets (ROA), by dividing earnings by assets.
- **Step 4:** Obtain the industry's average ROA for the same period.

Step 5: Calculate the excess ROA by multiplying the industry average ROA by the company's tangible assets. Subtract this from the pre-tax earnings in step one to identify the company earnings from its assets.

Step 6: Calculate the three-year average income tax rate and multiply this by the excess return. Subtract the result from the excess return for the after-tax number, the premium attributable to intangible assets.

Step 7: Calculate the net present value of the premium by dividing the premium by an appropriate discount rate e.g. weighted average cost of capital (WACC).

This apportions the calculated intangible value of the organisation, i.e. what doesn't appear on the balance sheet.

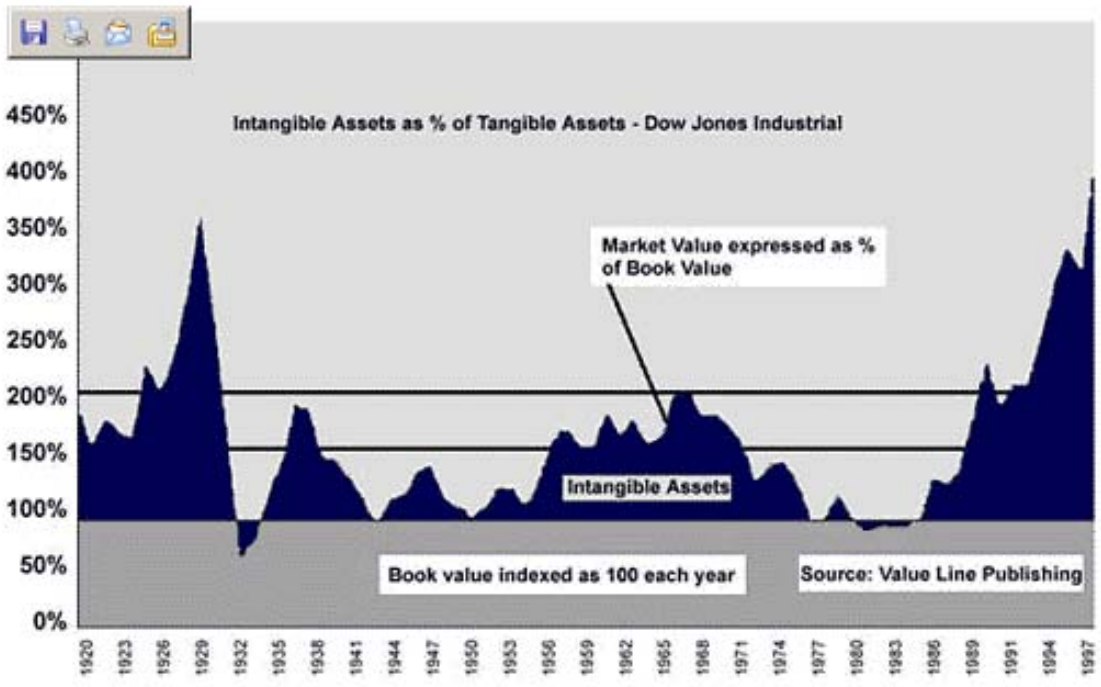

Figure 15: Intangible assets as a percentage of tangible assets – Value Line Publishing (1998)

2.11 Measuring Human Assets

2.11.1 Individual Human Asset Worth

A Human Capital Monitor considers what is it that makes one person more valuable than another and concludes that the answer is very organisation specific. For some, it is finding people who will fit in well and make good team members. For others, the ability to get certain kinds of results is all that matters. So any approach has to have some flexibility to meet different situations.

The formula suggested in the Human Capital Monitor for calculating Human Asset Worth (Mayo 2001):

$$HAW = EC \times IAM / 1{,}000$$

(Human Asset Worth = Employment Cost × Individual Asset Multiplier / 1,000)

This is divided by 1,000 so that the end result will not look like a monetary amount that can be directly compared with cost. The purpose is to be able to understand *relativities* and provide a guide to taking appropriate actions.

Employment Cost (EC) = Base salary + value of benefits + employer taxes

This is the cost of employing a person, including taxes such as social security or national insurance, and the value of the benefits package. It excludes bonuses unless they are in whole or part guaranteed. It also does not include the overheads of providing space and equipment, as these are so variable and are likely to be averaged out on a per person basis.

The Individual Asset Multiplier (IAM) is designed to reflect the different level of present and potential value to the person's current role and to the organisation. It uses a Weighted Average assessment of:

- Capability- the cumulative skills, knowledge, experience, and useful networks.
- Potential- to grow and contribute at a higher level.
- Contribution- to stakeholder value.
- Alignment- to organisational values.

To calculate the IAM, each of the factors is assessed on a scale of 0.1 to 2.0. These four factors are assigned a percentage importance out of 100; i.e., if all were equal, 25% to each. In some companies, and for some groups of people, potential may be deemed less important etc.

Capability

The value of an individual is in all their cumulative knowledge, skills, experience, and their relevant network of contacts. It is more than whether they have what is required by their current role. Their breadth is a measure of their flexibility for deployment in different roles - and this makes them more valuable. Whereas it is difficult to encapsulate this in numbers, it should be relatively easy to make judgments, as follows:

0.5	Has some noticeable deficiencies compared to expectations for this role.
1.0	Generally has the balance of capability expected for this role.
1.5	In several areas exceeds the level needed for the role; has unique knowledge and experience, and capability that can be applied in various other roles.
2.0	Has considerable breadth and depth beyond the basic needs of the role; known for unique expertise or has a range of capabilities that can be applied very flexibly.

Potential

An individual invests their Human Capital with an organisation with the expectation that they will grow and progress. The organisation also wants to maintain continuity and provide ongoing succession, as well as build its expertise. The potential to grow beyond the present role is a source of value in itself. It could be for managerial positions, or for growth in any area that is strategically important.

The scale for this factor would be as follows:

0.5	Probably over promoted at current level.
1.0	Expected at the very least to grow within the role, or to stay up to date with a speciality, or to move laterally to different roles.
1.5	Able to grow to at least one higher level of responsibility, or to one or two further levels of specialist depth.
2.0	Considered high potential for management positions or technical/professional leadership.

Contribution

Reflecting the fact that individuals add different amounts of value to stakeholders is due partly to the opportunities presented by their role, and partly to their personal performance. This factor should be based on specific measures of value added, not on competence or performance measures (such as achieving milestones) that a stakeholder cannot see.

The evaluation scale for this factor is suggested as follows:

0.5	Makes some measurable contribution to non-financial measures.
1.0	Makes an average level of contribution to either a financial or a non-financial measure, or a combination.
1.5	Makes an above-average contribution to either a financial or a non- financial measure, or a combination, with a significant proportion being aimed at future value creation.
2.0	Contributes considerably more to both financial and non-financial value measures than the average employee, with the majority aimed at future value creation.

Alignment

"Values", in the sense of the philosophy or ethos of the organisation, may be expressed formally in written (or espoused) form, or in an accepted unwritten understanding. In some organisations, but not all, this would be a key factor. Managers make judgments about "chemistry" and "fit" when they hire people. Good-performing, capable people who comfortably align themselves to our values have particular worth. They become "part of us" and are likely to be loyal to the organisation.

0.5	Shows little alignment to corporate values.
1.0	Behaviour does not explicitly conflict with values.
1.5	Makes considerable effort to live as many of the values as possible.
2.0	Known throughout as a role model for the organisation's values.

2.11.2 Collective Human Asset Worth

The purpose of an organisation is to organise the Human Capital of individuals in ways that produce more than they would as individual contributors. A team should be more than the sum of the individuals that make it up. *Workgroup effectiveness* is picked out as one of the contributing factors to the value-adding contribution. For the purposes of asset value comparisons, the combination of the Human Asset Worth of all the members of the team can be used.

Monti-Belkaoui & Riahi-Belkaoui (1995) suggested that Human Resource valuation should be based on value-addition, as it is a measure of wealth. Value addition is defined as the increase in wealth, generated by the productive use of the companies' resources before it' allocation among

stakeholders. A discussion paper by the Accounting Standards Committee in 1975 recommended that, amongst other things, a statement of value added showing how the benefits of the efforts of an enterprise are shared by employees, providers of capital, the government and reinvestment, be included in the external reporting.

The relative value of teams and departments

Efforts on the retention of talent can be focused through seeing the relative value of different groups of people. This value may then be compared with the contribution that the group is making, and their costs. Mayo (2001) states that there should be a more or less linear relationship between "asset value" and "value added" for most groups.

The distribution of potential

An understanding of how potential is distributed and where continuity problems exist is required.

The extent of values alignment

The factors that have been judged need to be taken into account to get a feel of how values alignment is distributed in functions and in areas. This may lead to some action to shift the culture more toward the espoused values.

The flexibility of the workforce

The higher the average factors for "capability," the more flexible the group. In times of restructuring this may save unnecessary redundancies and it also provides more options in career management.

This statement of value-add provides a useful measure to help gauge performance by relating key figures such as capital employed and employee costs. The limitation of this reporting method is that it reports on the performance, but not on the efficiency, of the value-addition.

2.12 Selected International Case Studies

The following studies have been reviewed to assess the components of the framework against potential applicability globally. These cases where selected from a research paper done by University of Cambridge on Human Capital and Performance (Stiles and Kulvisaechana, 2003). The cases list the types of HR measures and business measures which form part of the companies' metrics and include the findings initiated due to the focus on these particular measures. These cases were evaluated to identify any link between the HRM practices, are related to perceptual measures of organisational performance. Links are found between employee productivity, cash flow, and market value, and the value of HR initiatives measured for increase in productivity. Most studies support the link between HRM and performance but do not imperially show that HRM causes high performance.

Case study 1: Arthur (1994)
Single industry: 30 US steel mini-mills
HR measures: 10 variables - decentralisation, participation, general training, skilled workers, and level of supervision, social events, due process, wages, benefits, bonus, and percentage unionised. Clustered into two systems: control and commitment.
Outcome measures: manufacturing performance (labour efficiency, scrap rate) and employee turnover.
Controls: firm age, firm size, union status, business strategy.
Method: Regression
Findings: Commitment based HR systems associated with lower scrap rates and higher labour efficiency than control-based systems.

Case study 2: MacDuffie (1995)
Single industry: 62 automotive assembly plants in 16 countries (volume plants)
HR measures: HR policies (index of four items - hiring criteria, incentive pay, presence of status barriers and level of training)
Production organisation measures: use of buffers - 3 items, (e.g. incoming and work in progress inventory), work systems 6 items - including employment involvement (production-related suggestions, job rotation and quality tasks), total automation, production scale, model mix complexity, parts complexity, production design

age.
Outcome measures: labour productivity (hours of actual effort to build a vehicle), quality (consumer perceived, defined as defects per 100 vehicles).
Controls: total automation, plant scale, model mix complexity.
Method: hierarchical regression.
Findings: innovative HR practices affect performance not individually but as interrelated elements in an internally consistent HR system and these systems contribute most to plant productivity and quality when they are integrated with manufacturing policies of a flexible production system.

Case study 3: Huselid (1995)
Multi-industry: 968 US-owned firms with over 100 employees.
HR measures: High performance work system scale. 13 items elicited two factors (i) employee skills and organisational structures - items: formal job design, enhanced selectivity, formal training, quality of work program, quality circles, labour-management teams, information sharing programmes, formal grievance procedures, profit and gain-sharing plans, enhanced communications, (ii) Employee motivation - items: formal appraisal, linked to compensation, merit in promotion decision rules.
Outcome measures: turnover, productivity (log of sales per employee), corporate financial performance - market based measure Tobin's q, and accounting based measure - gross rate of return on capital employed (GRATE).
Controls: firm size, capital intensity, firm and industry levels of union coverage, industry concentration, growth in sales, R&D intensity, firm-specific risk, industry levels of profitability, net sales and total assets.
Method: regression analysis
Findings: high performance work systems have an economically and statistically significant impact on turnover, productivity and corporate performance. One standard deviation increase in HPWS is associated with a relative decrease of 7.05% in turnover, and on a per employee basis, $27,044 more in sales and $18,641 and $3,814 more in market value and profits respectively.

Case study 4: Delaney and Huselid (1996)
Multi-industry: 727 organisations.
HR measures: staffing selectivity index (3 items), training index (3 items), incentive compensation (3 items), grievance procedure, decentralised decision-making, internal labour market index (5 items), vertical hierarchy
Outcome measures: perceptual measures of organisational performance assessing organisational performance over the last three years relative to similar organisations (on product quality, customer satisfaction, new product development) and on perceived product market performance (profitability, market share) over three years relative to product market competitors.
Controls: profit/not-for-profit, subsidiary, number of employees, form age, market competition, union pressure, percentage of managers.
Method: regression analysis.
Findings: progressive HRM practices are positively related to perceptual measures of organisational performance, but do not support the assertion that complementarities among HR measures enhance performance.

Case study 5: Youndt et al (1996)
Single industry: 97 manufacturing plants
HR measures: administrative HR systems index (selection for manual and physical skills, training, results based appraisal, individual equity, individual incentives and hourly pay).
Human capital enhancing HR system index (selective staffing, selection for problem-solving and technical skills, development and behaviour base appraisal, external equity, group incentives, skill-based pay and salaried compensation), a range of manufacturing strategies (cost, quality, flexibility on delivery and scope).
Outcome measures: self-report measures of machine efficiency (e.g. equipment utilisation, scrap minimization); customer alignment (e.g. product quality, on-time delivery); and employee productivity (e.g. employee morale).
Controls: organisational size, industry environment.
Method: regression analysis
Findings: HR system focused on Human Capital enhancement directly related to multiple dimensions of operational performance. This was predominately so for links to a quality manufacturing strategy, giving broad support for contingency perspective.

Case study 6: Delery and Doty (1996)
Single industry: banking - 114 banks.
HR measures: 7 HR practices. Internal career opportunities (4 items), formal and informal training (4 items), appraisal (2 items), profit sharing (1 item), employment security (4 items), employee participation (4 items), job description (4 items).
Strategy: scale of six items measuring product/market innovation.
Outcome measures: two financial measures: return on average assets, return on equity.
Controls: bank size, bank age, part of a holding company, bank district.
Method: hierarchical regression analysis.
Findings: Three individual HR practices - profit sharing, results-oriented appraisals and employment security had relatively strong universalistic relationships with important accounting measures of performance. Contingency relationships between strategy and three HR practices - participation, results oriented appraisals, and internal career opportunities - explained a significant portion of the variation in the same performance measures. Similarity, the market-type employment systems was positively related to firm performance. The study demonstrates that universalistic, contingency and configurationally perspectives can explain significant levels of variation in financial performance.

Case study 7: Huselid, Jackson & Schuler (1997)
Multi-method: 293 publicly held US firms.
HR measures: strategic HRM scale (8 items including teamwork, communications, involvement, enhancing quality and developing talent to serve business in future)
Technical HRM scale (describes perceptions of how well the HR function performs activities - 8 items including recruitment, selection, training, performance appraisals and compensation administration).
Professional HRM capabilities scale (describes expertise and skill relevant to performing excellently within HR function) - 11 items
Business related capabilities scale (describes the amount of business experience HR staff have had outside of HR function) - 3 items
Outcome measures: employee productivity (net sales per employee, gross rate of return on assets, and profitability, Tobin's q).

Controls: union coverage, firm size, capital intensity, industry concentration, sales growth, R&D expenditures, stock price variability (beta) and firm industry.
Method: regression analysis.
Findings: Significant relationship between strategic HRM and employee productivity, cash flow, and market value. No meaningful relationship between technical HRM and firm performance. On a per employee present value basis, a one standard deviation increase in overall HRM effectiveness corresponds to an estimated increase in sales per employee of 5.2%, a cash flow of 16.3%, and a market value of 6%.

Case study 8: Ichniowski ,Shaw, and Prennushi (1997)
Single industry: 36 finishing lines in 17 US owned companies matched with 2190 monthly observations of productivity data.
HR measures: identified 8 HR variables (incentive pay, recruitment and selection, employment security, flexible job assignment, communications and labour relations) and identified 4 distinctive combinations of HR practices.
System 1 (incorporates innovative practices in all areas). Lines with this system have incentive pay plans, profit sharing, extensive screening of new employees, recruitment, high participation, multiple teams, formal team practice, employment security, job rotation, high training, low training, information sharing, managers meet workers regularly, meet with union, unionised, low grievance.
System 2 (similar to three but also includes extensive skills training and high involvement in teams).
System 3 (similar to system 4 except introduced innovative practices through worker involvement in teams and enhanced labour management communication).
System 4 - traditional HRM (firms identified as having no innovative practices with close supervision, strict work rules, narrow job responsibilities, incentive based pay on quantity not on quality of output, no work teams, no information sharing and no formal training).
Outcome measures: productivity (production line uptime - percentage of scheduled operating time that the line actually runs); quality (percentage of total production that met the industry standards).
Controls: capital vintage (when line was built), learning curve effects, technical line specifications, periods of unusually high downtime, quality of steel input, maintenance activity effects.
Method: OLS regression.
Findings: innovative HRM practices raise worker productivity and systems of innovative HRM practices had large effects on production workers' performance. While changes in individual employment practices have little or no effect.

Case study 9: Patterson et al (1997)
Single industry: 67 single site single product manufacturing firms with less than 1000 employees.
HR measures: acquisition and development of employee skills (selection, induction, training and use of appraisals); job design (skill flexibility, job responsibility, job variety and use of formal teams); quality improvement teams, communication, harmonisation, comparative pay, incentive compensation systems.
Outcome measures: labour productivity, real profits per employee (profits before tax, deflated by the producer price index of the industry and controlling for size of firm).
Method: qualitative and quantitative data collection, multi-level.
Findings: HRM practices account for 19% of variation between companies in change for profitability and 18% of variation between companies for change of productivity. The acquisition and development of skills and job design are significant determinants of change in both productivity and profitability.

Case study 10: Guest et al. (2000)
Multi-industry: 610 firms above 50 employees
HR measures: use and coverage of HR practice (48 items in the following sections): recruitment and selection, training and development, appraisal, financial flexibility, concern with quality, job design, communication and consultation, employment security and single-status and harmonisation.
Outcome measures: HR outcomes 8 items, including employee commitment, flexibility, and behaviour.
Human capital and performance 38, Human capital and performance 39.
Performance outcomes: labour turnover, absenteeism, perception of the firm's financial results, labour productivity, quality of products/services and effectiveness of HR practices compared with other organisations in the same industry.
Controls: composition (part-time, short-term employment), representation at the workplace (trade union recognition, single union/partnership deals, presence of a staff association) and redundancies.
Method: matched sample of HR managers and CEOs. Regression.
Findings: effective use of progressive HR practices is linked to superior performance, and also linked to perceptions of positive employee attitudes and behaviour.

Case study 11: Guest et al. (2003)

Multi-industry: 366 firms with over 50 employees
HR measures: 48 items on HRM covering nine main areas: recruitment and selection, training and development, appraisal, financial flexibility, job design, two-way communication, employment security and the internal labour market, single-status and harmonisation, and quality.
Outcome measures: labour turnover, absence and industrial conflict. Labour productivity (value of sales per employee) and financial performance (company's profit per employee).
Controls: sector, trade union membership, part of multinational, presence of consultative committee, staff committee, and single union deal, respondent holds HR position, perceived importance of overall HR policy in terms of controlling for labour costs.
Method: telephone interview using structured questionnaire, regression.
Findings: using objective measures of performance, greater use of HR practices was associated with lower labour turnover and higher profit per employee, but showed no association with HR and productivity. There was a strong association between subjective estimates of HR and productivity and financial performance. The study supports the association between HRM and performance but does not show that HRM causes high performance.

From these cases, it is clear that HR measures have a direct influence on the performance and productivity of companies. This is again linked to the bottom line of the organisations as it effects production, client interactions and team effectiveness. Measures such as the increase in sales per employee have a positive effect on cash flow, which in turn has a positive effect on profits and thus market value. Although a number of similarities exist, it is the opinion of the researcher that there are a number of South African specific issues to be taken into consideration and a global framework may have to include a country specific section (identified as a limit to the current study).

2.13 Arguments against Accounting for Human Capital

Although many authors have evaluated the theory of valuing Human Assets by putting it on the balance sheet, there are those who argue against such a concept.

Kearns (2003:94) states that "surely Human Capital is already on the balance sheet even though it is not explicitly listed and the problem of measuring Human Capital is not actually an accounting or actuarial problem". Kearns (2003) supports his assessment by referencing the Enron scandal whereby the accounting conventions followed was subverted in order to create a false impression.

Philips (2005:95), states "Several disadvantages are inherent in macro level (Human Capital) analyses. First, a study is often very complex, difficult to conduct, and often requires skills that are

beyond the capability of many Human Capital managers. Attempting to replicate a study at the organisational level may be impossible for most Human Capital functions."

Another question HR practitioners battle to answer which affects the approach for accounting for HR is; Do effective HR practices drive (cause) positive financial results or do positive financial results lead to better HR practices (i.e., successful business can afford higher quality HR programs)?. Watson Watt (1999) showed in their study that the relationship moves both ways, creating a "virtuous cycle."

Kearns (2003) is the biggest critique of both intangible and accounting principles applied to Human Capital. He has very compelling arguments against the book value view of Human Capital; based on the fact that share price determines market capitalisation or market value. His reasoning is based on the fact that share prices can swing in either direction which will in effect mean that should the share price be at its lowest, by implication the Human Capital of such an organisation would also be at its lowest. "Share prices, which can be subject to wide fluctuations on a daily basis, can hardly be said to truly reflect the value of human beings" (Kearns, 2003:92). In defence of his argument, one may ask what the value is of properties and buildings as assets on the balance sheet of such an organisation at that particular moment in time. The value certainly does not fluctuate with the share price, as the value of the Human Assets should not fluctuate. This concern is shared by Lester (2002) who concurs that the IC ratio is susceptible to market fluctuation.

Rutledge (1997:3) wrote, "Monkeying with financial statements, for almost any reason, is a terrible idea. Investors have 500 years of practice interpreting financial statements while learning to understand, project, get comfortable with, and value our more than $60 trillion in total assets. In doing so, they have developed methods to adjust for many of the anomalies (for example, amortisation of goodwill, which can only be defined by describing what it is not) that emerge from our archaic double-entry bookkeeping practices from time to time. Scrambling the financial data we use to make such judgments would render these methods less useful. It also would throw up a cloud of uncertainty large enough to make owning assets more risky, and therefore less valuable. Giving people more information is fine. They can make their own judgments. Tinkering with the balance sheet is not a good idea. Although Intellectual Capital is important (who would doubt that people who know how to do things are more successful than people who don't?), it should be left off the balance sheet. Balance sheets are for stuff, the stuff that George Carlin talks about, not people or ideas. People aren't assets because you can't own them, at least not in this country (I'm neglecting alimony

here); you can only rent them. Ideas are not assets because, partly due to the fact that the people who generate them can't be owned, you can't keep them bottled up for very long (except for the secret formula for Coke, that is). If you want to measure the value of people and their ideas, you need to look at cash flows, not assets."

In the case of this study, the researcher did not edit any of the above statements, but placed the proposition of this study in a broader framework. This study does not only look at accounting for Human Capital in terms which business will understand and relate to, but also considers the extraction of value, focused on increasing shareholder value, through Human Resources Management.

2.14 Conclusion

The literature studied in this chapter provided a solid foundation for the study and objectives stated at the beginning of the chapter was met, providing substantial information to facilitate the development of a draft framework to facilitate the research process.

The literature shows that there are many dimensions to be taken into account for evaluating and calculating the value of Human Capital in an organisational context. Although the idea that Human Capital should be recognised as a line item in financial statements has been considered by a number of authors, researchers and even valuers, many of the proposed methods and calculations have lost acceptance. This may well be because most of these methods use different logic and calculation methods. For this study, the researcher endeavours to identify those components that are common or appear in multiple methods, testing this against the South African environment and the HR industry in general, and uses the generally accepted financial principles to measure this against the view to increase the knowledge base with an increased understanding of what influences (increases or detracts from) the value of Human Assets for an organisation.

The key consideration seemingly not taken into account is that valuing Human Assets will be required to overcome a number of hurdles to be accepted as an Asset in International Accounting Standards. An asset needs to meet the following criteria (Flamhotlz, 1999):

- Possess a potential for future benefits.

- Benefits must be measured in monetary terms.

- Future benefits which might include a contribution to future net cash flows, or cost savings, must be owned or controlled by the firm.

From the literature review, it is clear that all these methodologies depend upon the use of metrics (quantitative measures). However, whilst some of these (such as EVA approaches) focus on factors that are capable of being valued in monetary terms, others (such as the Skandia Navigator, the Balanced Scorecard and the EFQM Excellence Model) concentrate more on non-monetary methods. Whereas some (such as EVA and the IC index) adopt a holistic approach, concentrating on one or a few high level metrics such as wealth generated per full time equivalent employee and human investment ratios, others (such as the Balanced Scorecard and the Skandia Navigator) adopt an atomistic approach, with numerous measures of different aspects of skills and learning, employee engagement and behaviours etc.

The contribution of Human Capital to technological progress, i.e. to the development and adoption of new technologies and to the continued improvement of existing production processes, innovation and ultimately company growth is mostly measured in intangible terms and even some of these may not be in line with the new economy for knowledge workers. That is measured is almost certain to improve. If there is uncertainty as to what to measure should all, or nothing, be measured? What is the impact on the organisation - the investment by stakeholders in the organisation?

Consideration will need to be given to the fact that the literature shows it is difficult to quantify most intangible assets in a monetary way, and whatever measures are reported on will compete with the financial measures' credibility and appearance of accuracy. People are mobile, subjective, changeable, and variable and as far from an accountant's concept of an asset as can be imagined. Reporting on Human Assets clearly will possess a challenge for the current accounting standards. The International Accounting Standard (IASC 38), which deals with the valuation of intangible assets, excludes the whole area of Human Capital (and others, such as brands) as not conforming to the definition of an asset (Mayo, 2001).

However, as stated by Zimmerman (2001:3), "Under growing pressures to innovate and to respond to turbulent competitive environments, there is a widespread recognition across all industrial sectors

that the know-how, imagination and creativity of employees is becoming at least as critical to business success as 'hard' assets".

Another consideration is that the increasing or measuring the value of Human Assets is the function of Human Resources. Using HR practices that facilitate achieve and enhance Human Capital effectiveness requires investing in HR activities. However, HRM practices need to be applied effectively in order to increase the performance as indicated by productivity, turnover and financial indicators. A study by the Fortune Magazine (1997) on the world's most admired companies, clearly showed that highly admired and successful companies take their HR responsibilities more seriously than their competitors. The companies included Bayer, Bertlesmann, Citibank, Daimler-Benz, Dai Nippon, Disney, General Electric, Gillette, Federal Express, Intel, L'Oreal, Nestle, Nucor, Procter & Gamble, Roche Holdings, SBC Communications, Smith Kline Beecham, and Sony. It is thus safe to assume that HR programmes such as attraction and recruitment, retention, training and development, motivation, rewards and recognition, aligning business and HR strategies, etc. can be considered as the key to unleashing the value of Human Assets for the organisation. Showing the correlation between these programmes and the bottom line remains the challenge for HR practitioners.

Chapter 3 introduces the research methodology followed in the study based on the theoretical construct set out in this chapter to derive at the Framework for Human Capital Reporting.