

**A HUMAN CAPITAL FRAMEWORK FOR INCLUSION IN COMPANY  
ANNUAL REPORTS**

**A South African Perspective**

**Reuphillan Kasselmann**

Submitted in partial fulfilment of the requirements

for the degree PhD: Organisational Behaviour

in the Faculty of Economic and Business Sciences,

University of Pretoria, Pretoria



Study leader: Prof. C. Hoole

21/03/2006

## DECLARATION

I hereby declare that “A HUMAN CAPITAL FRAMEWORK FOR INCLUSION IN COMPANY ANNUAL REPORTS - A South African Perspective” is my own work and that all the sources used by me and referred to in this regard has been duly acknowledged and listed.

I also declare that the content of this thesis has not been, nor will be, handed in for any other qualification at any other tertiary institution.

The language in this dissertation was edited by Melody Edwards.

---

Reuphillan Kasselman

---

April 2006\_

## ACKNOWLEDGEMENTS

I would like to express my sincere thanks, appreciation and gratitude to:

My study leader, Professor Crystal Hoole, for her advice, encouragement, many reviews and belief in my abilities.

Dr Denise Du Toit for her encouragement and willingness to listen patiently to my ideas.

The respondents and consultants for their time and input, especially Frik Reynecke for keeping me in mind and passing on relevant information continuously and Deloitte for the access to knowledge and insights as well as the original framework (Enterprise Value Map) which helped form the study and structure.

My husband, Hennie, for the help with the database, his patience with the long hours and mostly for his support and encouragement.

My children, Allan and Keith for understanding, but mostly for being my source of strength driving me to complete such a demanding task.

Thank you.

**To God all the glory for blessing me with the talent to add value in this  
and in so many other ways.**

## ABSTRACT

A company's ability to support its business strategy with its Human Capital is an important indication of the company's future business performance. No standard or framework to enable the inclusion of Human Capital information in company reporting to demonstrate the effect on performance currently exists.

Traditional HR metrics fail to report on the level of performance, knowledgebase or value of Human Capital, making it virtually impossible for stakeholders or valuers of companies to take this most important asset into account in valuing the company against its competitors.

This exploratory study has been commissioned to add new theory which would span further research with the objective of improving the reporting systems and/or methodologies to value Human Capital for South African industry.

The study poses the following questions:

1. What insight should investors and other external stakeholders have into the Human Capital employed by a specific organisation?
2. How best to ensure that Human Capital is reported and the information is trusted by investors and other stakeholders as seen as relevant, reliable and consistent, adding value to shareholders?
3. Which Human Resource Management components can form a basis for comparative external reporting on Human Capital (if any)?

The study created an innovative framework for reporting which, is viewed as an improved, practical and theoretical approach and method relating to Human Capital and value creation for Human Assets.

Triangulation was used to include a number of different metrics used by HR, linked to a framework that allows those who uses it to link quantitative calculations to Human Capital dimensions. Further

testing may be required due to the limited insight and knowledge of current practitioners which may have skewed some of the results.

This framework also links to a number of business questions and metrics which in turn, link to broader HR strategic themes and recommendations for reporting as part of company annual reports and which Human Capital aspects should be included as standard in such a report.

The study provides Human Resource practitioners with the ability to counter the one-sidedness of viewing people as purely costs, demonstrating the value of Human Assets in quantitative terms.

---

**TABLE OF CONTENTS**

<b>DECLARATION</b>	<b>II</b>
<b>ACKNOWLEDGEMENTS</b>	<b>III</b>
<b>ABSTRACT</b>	<b>IV</b>
<b>LIST OF TABLES</b>	<b>XI</b>
<b>LIST OF FIGURES</b>	<b>XII</b>
<b>LIST OF EQUATIONS</b>	<b>XIII</b>
<b>CHAPTER 1 - THE PROBLEM AND ITS CONTEXT</b>	<b>1</b>
1.1 Introduction	1
1.2 Need for research in this field	2
1.3 Problem Statement and Objectives	3
1.3.1 Problem Statement	5
1.3.2 Objectives of this research	5
1.4 Conclusion	6
<b>CHAPTER 2 - LITERATURE REVIEW</b>	<b>7</b>
2.1 Introduction	7
2.2 Studies focused on HR Practices linked to business success	8
2.3 Key Theoretical Concepts	13
2.3.1 Invisible (Intangible) Assets	15
2.3.2 Intellectual Capital (IC)	17
2.3.3 Human Capital (HC)	18
2.3.4 Human Assets	19
2.3.5 Value Based Management	22
2.3.6 Employee Relations Management Solutions	24
2.4 Company Reporting	26
2.4.1 Elements of Financial Statements	29
2.4.2 Reporting Non-Financial Measures	32
2.5 Measuring Shareholder Value	33
2.5.1 Enterprise Value Map (EVM)	34

---

<b>2.6</b>	<b>Reporting (Accounting) for Human Capital</b>	<b>36</b>
2.6.1	Universal (Best Practices) Approach	37
2.6.2	Reporting Human Capital Measures	38
<b>2.7</b>	<b>Measuring Human Capital</b>	<b>39</b>
2.7.1	Human Capital ROI	40
2.7.2	Human Capital Index (HCI)	42
2.7.2.1	Simple HC Index	42
2.7.2.2	Complex HC Index	42
2.7.3	Best Investment in Human Capital (BIHC)	43
2.7.4	Balanced Scorecard (BSC)	43
2.7.5	HR Scorecard	45
<b>2.8</b>	<b>Measuring Intellectual Capital</b>	<b>51</b>
2.8.1	Intellectual Capital (IC) Index	52
2.8.2	EFQM Excellence Model (EFQM)	52
2.8.3	People Value Add (PVA)	53
2.8.3.1	Economic Value Add (EVA)	53
<b>2.9</b>	<b>Measuring Intangibles</b>	<b>54</b>
2.9.1	Skandia Navigator / Intangible Assets Monitor	57
<b>2.10</b>	<b>Valuing Assets</b>	<b>61</b>
2.10.1	Calculated Intangible Value Method (CIV)	62
<b>2.11</b>	<b>Measuring Human Assets</b>	<b>63</b>
2.11.1	Individual Human Asset Worth	63
2.11.2	Collective Human Asset Worth	67
<b>2.12</b>	<b>Selected International Case Studies</b>	<b>69</b>
<b>2.13</b>	<b>Arguments against Accounting for Human Capital</b>	<b>75</b>
<b>2.14</b>	<b>Conclusion</b>	<b>77</b>
<b>CHAPTER 3</b>	<b>- RESEARCH METHODOLOGY</b>	<b>80</b>
<b>3.1</b>	<b>Introduction</b>	<b>80</b>
<b>3.2</b>	<b>Theory</b>	<b>82</b>
<b>3.3</b>	<b>Detail of the chosen procedure</b>	<b>83</b>
<b>3.4</b>	<b>Reasoning</b>	<b>86</b>
<b>3.5</b>	<b>Participants and Sampling</b>	<b>87</b>
<b>3.6</b>	<b>Target Groups</b>	<b>87</b>
3.6.1	Executives and Senior HR Managers	88
3.6.2	HR Consultants and Students	89
3.6.3	Auditors	89
3.6.4	Human Capital Specialists	90

---

---

<b>3.7</b>	<b>Data Collection</b>	<b>91</b>
3.7.1	Case Studies	91
3.7.2	Semi-structured Interviews with Executives and Senior HR Managers	91
3.7.3	Interviews	92
3.7.4	Surveys (Questionnaires)	93
3.7.4.1	Survey methodology	94
3.7.5	Delphi Technique	94
<b>3.8</b>	<b>Data Analyses</b>	<b>96</b>
<b>3.9</b>	<b>Conclusion</b>	<b>97</b>
<b>CHAPTER 4 - RESULTS AND DISCUSSIONS</b>		<b>98</b>
<b>4.1</b>	<b>Introduction</b>	<b>98</b>
<b>4.2</b>	<b>Current situation - Human Capital Value Add</b>	<b>99</b>
4.2.1	Findings	99
4.2.1.1	Category 1: Human Resource Management Today	99
4.2.1.2	Category 2: Reporting key indicators - Internally and Externally	100
4.2.1.3	Category 3: Technology Systems utilised for Human Capital Management (HCM)	103
4.2.2	Lessons learned and considerations	105
<b>4.3</b>	<b>Reporting on Human Capital</b>	<b>105</b>
4.3.1	Findings	106
4.3.1.1	Category 1: Most important indicators	106
4.3.1.2	Category 2: HR reports that support and/or enable business decisions	110
4.3.2	Lessons learned and considerations	112
<b>4.4</b>	<b>Using Metrics and Benchmarking</b>	<b>112</b>
4.4.1	Findings	113
4.4.2	Lessons learned and considerations	117
<b>4.5</b>	<b>Comparative External Reporting on Human Capital</b>	<b>117</b>
4.5.1	Findings	118
4.5.1.1	Category 1: Is it essential to share strategic information with all stakeholders?	118
4.5.2	Lessons learned and considerations	122
<b>4.6</b>	<b>Further results of semi-structured interviews</b>	<b>123</b>
4.6.1	Preferred Employer / Employer of Choice Status	123
<b>4.7</b>	<b>Conclusion</b>	<b>124</b>
<b>CHAPTER 5 PROPOSED FRAMEWORK</b>		<b>127</b>
<b>5.1</b>	<b>Introduction</b>	<b>127</b>
<b>5.2</b>	<b>Methodology for the Framework</b>	<b>128</b>
<b>5.3</b>	<b>Framework for HR</b>	<b>128</b>
<b>5.4</b>	<b>Proposed Framework</b>	<b>130</b>

---



---

5.4.1	Operating Margin (A1)	133
5.4.1.1	Reduce total cost of employee interactions (B1)	133
5.4.1.2	Increase efficiency (B2)	134
5.4.2	Revenue Growth (A2)	135
5.4.2.1	Increase employee's impact on customer	135
5.4.2.2	Improve employee performance (B4)	137
5.4.2.3	Improve asset productivity (B5)	138
5.4.2.4	Technology Assets (C10)	138
5.4.3	External Factors	139
<b>5.5</b>	<b>Using the Framework</b>	<b>140</b>
<b>CHAPTER 6 - PROPOSED HUMAN CAPITAL REPORTING (BUSINESS QUESTIONS)</b>		
	<b>141</b>	
6.1	Introduction	141
6.2	Human Capital / Human Resources Business Questions	143
6.2.1	Internal reports linked to bottom line	143
6.3	External Reports	174
6.4	Performance Metrics	175
6.5	Conclusion	181
<b>CHAPTER 7 – REPORTING HUMAN CAPITAL IN COMPANY ANNUAL REPORTS</b>		<b>182</b>
7.1	Introduction	182
7.2	Principles for Reporting	183
7.2.1	Principles	183
7.2.2	Features of the report	184
7.3	Company Annual Report	185
7.4	Conclusion	187
<b>CHAPTER 8 - CONCLUSIONS AND RECOMMENDATIONS</b>		<b>188</b>
8.1	Introduction	188
8.2	Expected impact of results	192
8.3	Contributions of the present study	194
8.4	Recommendations for future work	195
8.5	Limitations of the present study	196
<b>ADDENDUM A - TERMS AND DEFINITIONS</b>		<b>197</b>
<b>ADDENDUM B - DELPHI WORKSHOP RESULTS</b>		<b>203</b>

---

---

<b>LIST OF REFERENCES</b>	<b>210</b>
<b>APPENDICES</b>	<b>221</b>

## List of Tables

Table 1: Key Methods / Models for measurement	15
Table 2: Key Indicators	103
Table 3 HR Reporting	113
Table 4: Top Most Important Indicators (Metrics)	116
Table 5: Information readily available and shared with stakeholders	119
Table 6: Additional Information considered essential by auditors	120
Table 7: Information to be shared externally	121
Table 8: Effectiveness of HR Contributions - Boudreau (1998)	143
Table 9: Business Questions - adapted from SAP (2003)	173
Table 10: Key Indicators Reported Externally	174
Table 11: HR Reporting Principles	184

---

## List of Figures

Figure 1: The European Business Excellence Model – EFQM Website: <a href="http://www.efqm.org">http://www.efqm.org</a> (2005)	
10	
Figure 2: Fit–Cost–Value™ framework – Arthur Anderson (1998)	12
Figure 3: WM-data Intangible Assets per share - WM-data Annual Report (1995)	16
Figure 4: Shareholder Value Map, adapted from Deloitte (2003)	36
Figure 5: Gratton’s Causal Model - Gratton (2000)	39
Figure 6: A Human Capital Income Statement Fitz-End (2002)	41
Figure 7: Transforming the HR Architecture into a Strategic Asset - Becker et al. (2001)	46
Figure 9: HR and Strategy Implementation - Becker et al. (2001)	47
Figure 11: Intersection of HR with Strategy Map - Becker et al. (2001)	49
Figure 12: The Creation of Employee Strategic Focus through Increasing Measurement Sophistication - Becker et al. (2001)	50
Figure 13: Invisible Assets Measuring Models - adapted from Sveiby (1997)	57
Figure 14: Skandia Framework – Edvidsson (in Anon, 1992)	57
Figure 15: Intangible Assets Monitor - Mayo (2001)	58
Figure 16: Human Capital Monitor – Mayo (2001)	59
Figure 17: Intangible assets as a percentage of tangible assets – Value Line Publishing (1998)	63
Figure 18: Research Process (author’s own)	82
Figure 19: Research Methods (author’s own)	83
Figure 20: Steps followed in Research Methodology	86
Figure 21: Executives and Senior Managers Respondents by Industry	88
Figure 22: Auditors - Group Age Distribution	89
Figure 23: Auditors – Number of years in position	90
Figure 24: Specialists Education and Experience	91
Figure 25: Usage of Technology Systems	104
Figure 26: Top Most Important Indicators (Reports)	106
Figure 27: Balance Scorecard Example	108
Figure 28: Median responses for all metrics evaluated	116
Figure 29: Proposed Framework	130
Figure 30: Operating Margin	133
Figure 31: Revenue Growth	135
Figure 32: Service Profit Chain – adapted from Heskett et al., (1994)	136

---

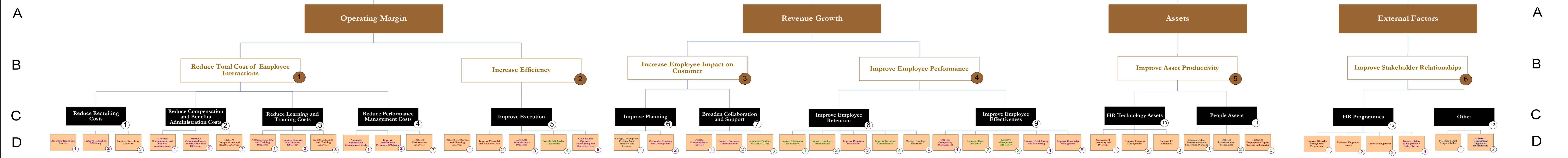
Figure 33: Assets	137
Figure 34: External Factors	139
Figure 35: Example HC Corporate Report	186

### **List of Equations**

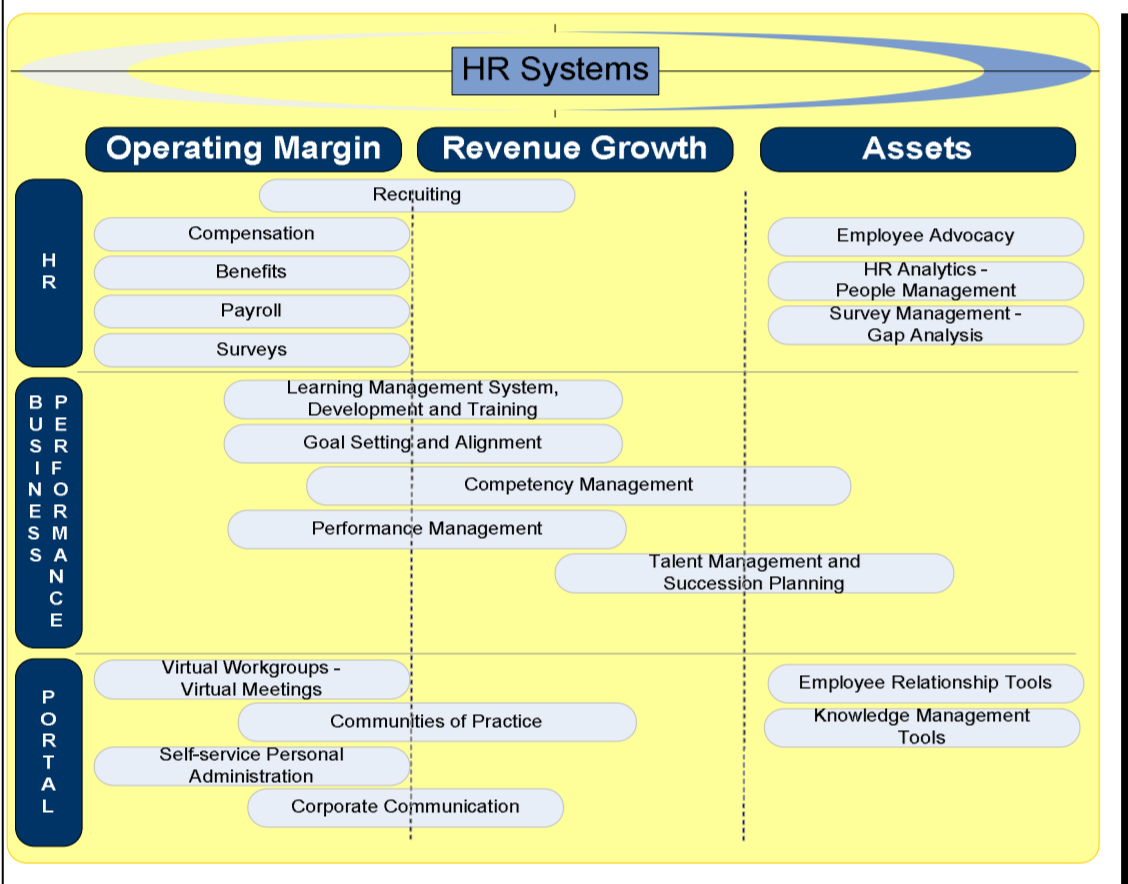
Equation 1: Sveiby's leverage effect formula – Sveiby (1997)	60
--	----

Human Capital Reporting Framework

Increase Shareholder Value



HR Efficiency Themes  
Improve Employee Productivity  
Develop a Continuous Performance Culture  
Strengthen Knowledge Sharing and Learning  
Elevate People Management to a Strategic Level  
Increase Value to Customers through Employees



HR Efficiency Themes  
Improve Employee Productivity  
Develop a Continuous Performance Culture  
Strengthen Knowledge Sharing and Learning  
Elevate People Management to a Strategic Level  
Increase Value to Customers through Employees

**Operating Margin**  
This analysis tracks and understands the various costs that contribute to the total cost of employee interactions.  
**Recruitment Costs**  
Evaluate the costs of recruitment - direct and indirect - that impacts Total HR Cost (2) Efficiency and Cost Effectiveness.  
**Separation Analyses**  
Analyze the reasons for employee separations by function, organization, function etc.  
**Skill Gap Trends**  
The purpose of this analysis is to give you a high level view of the skill gap or skill shortage within your organization.  
**Employee Costs**  
Analyze the organization's total cost of employee interactions.  
**Employee Lifecycle**  
Evaluate the employment life cycle of a typical employee within the organization and how this has changed over time.  
**Headcount Summary**  
Analyze the status of the organization in terms of current headcount and associated full-time equivalents (FTE).  
**Training Summary**  
This analysis gives you a high level summary of the time and costs invested in training and developing your workforce.  
**Recruitment Summary**  
Analyze the take up of benefits by tax resident to determine whether any are potentially disallowed.

**Revenue Growth**  
Monitor the level of job satisfaction experienced by your workforce and compare period on period - comparing the satisfaction rating improved since last assessment.  
**Tenure Distribution**  
Analyze the distribution of employee tenure by organization, function, etc.  
**Length of Service Distribution**  
Analyze the length of service distribution by organization, function, etc.  
**Benefit Optimisation**  
The purpose of this analysis is to enable you to understand better the value to employees for a particular benefit.  
**Quality of Hires**  
Provides visibility of the progress made by new hires within the organization in comparison to new hires in a previous period.  
**Skills Gap**  
Provides the skill gap or skill shortage within the workforce, matching the employee's skill against the skill requirement for the job.  
**Separation Analyses**  
Analyze the reasons for employee separations by function, organization, function etc.  
**Headcount Trend**  
This analysis allows you to view the current workforce and trends relating to the employment status of the organization, including part-time and full-time.  
**Skills level by Employee**  
This analysis allows you to view the current workforce and trends relating to the employment status of the organization, including part-time and full-time.  
**Succession Planning**  
Analyze the readiness of employees to take on the role of a key employee within the organization.

**Assets**  
This analysis highlights the processes that are most successful in increasing the value to employees for a particular benefit.  
**Vacancy Exceptions**  
How many days has the position been vacant?  
**Skill Depletion Impact**  
What is the effect on department skill levels when an employee leaves the organization?  
**HR Technology Assets**  
Analyze the impact of HR technology on the organization's performance.  
**People Assets**  
Analyze the impact of people assets on the organization's performance.  
**HR Programmes**  
Analyze the impact of HR programmes on the organization's performance.  
**Other**  
Analyze the impact of other factors on the organization's performance.

**External**  
**Salary Analyses**  
How do salaries compare in different organisations within the business?  
**Workforce DNA**  
Understand the typical characteristics of your workforce, with your workforce by organization for improved planning and reporting.

**HR Metrics**

Metric	Description	Formula
Recruitment Costs	Cost of recruitment - direct and indirect	Total HR Cost (2) Efficiency and Cost Effectiveness
Separation Analyses	Reasons for employee separations	By function, organization, function etc.
Skill Gap Trends	High level view of skill gap or skill shortage	Within your organization
Employee Costs	Total cost of employee interactions	Operating Margin, Revenue Growth, Assets
Employee Lifecycle	Employment life cycle of a typical employee	Organization and how this has changed over time
Headcount Summary	Status of organization in terms of current headcount	Associated full-time equivalents (FTE)
Training Summary	Time and costs invested in training and developing workforce	High level summary
Recruitment Summary	Take up of benefits by tax resident	Determine whether any are potentially disallowed
Satisfaction Survey	Level of job satisfaction experienced by workforce	Compare period on period
Tenure Distribution	Distribution of employee tenure	Organization, function, etc.
Length of Service Distribution	Length of service distribution	Organization, function, etc.
Benefit Optimisation	Value to employees for a particular benefit	Particular benefit
Quality of Hires	Progress made by new hires within organization	Comparison to new hires in a previous period
Skills Gap	Skill gap or skill shortage within workforce	Matching employee's skill against the skill requirement for the job
Separation Analyses	Reasons for employee separations	By function, organization, function etc.
Headcount Trend	Current workforce and trends relating to employment status	Including part-time and full-time
Skills level by Employee	Current workforce and trends relating to employment status	Including part-time and full-time
Succession Planning	Readiness of employees to take on the role of a key employee	Within the organization
Compensation and Benefits	Value to employees for a particular benefit	Particular benefit
Development and Training	Time and costs invested in training and developing workforce	High level summary
Employee Demographics	Typical characteristics of workforce	By organization for improved planning and reporting
Professional Employer	Typical characteristics of workforce	By organization for improved planning and reporting
Social Responsibility	Typical characteristics of workforce	By organization for improved planning and reporting