Developing an Instrument to Measure the Strategically Innovative Environment of Life Insurance Organisations in Southern Africa

A thesis submitted by:

Dirk Burger

In partial fulfilment of the requirements of the degree:

Philosophiae Doctor Information Technology

In the Faculty of Engineering, Built Environment and Information Technology

University of Pretoria

March 2010

Supervisor:

Prof. Dr. J.A. Boon

© University of Pretoria
Abstract

Candidate : Dirk Burger
Supervisor : Prof. Dr. J.A. Boon
Department : Information Science
Degree : Philosophiae Doctor in Information Technology
Title : Developing an Instrument to Measure the Strategically Innovative Environment of Life Assurance Organisations in Southern Africa

This thesis reports on an exploratory study to see to what extent an instrument could be developed to measure the strategically innovative environment of life assurance organisations in Southern Africa. This instrument was applied to a number of life assurance organisations in Southern Africa and the results plotted on a four quadrant matrix, developed for this study, to illustrate to what extent certain variables could contribute in establishing a strategically innovative environment.

The main contribution of this study is to explain the interaction between the knowledge economy, intellectual capital, the corporate curriculum, learning theory and strategic innovation. This study argues that the interaction between these components is key in developing human capital which in turn is an important component of strategic innovation. Furthermore, the instrument developed for this study can be used to evaluate other organisations, thus ultimately assisting them in becoming strategically innovative as well.

It was found that life assurance organisations in Southern Africa could be regarded as moderately strategically innovative. The degree of strategic innovation varies according to the presence and integration of certain variables set out for the organisation.

Keywords: knowledge; knowledge economy; organisational learning; intellectual capital; learning theory; strategic innovation
Opsomming

Kandidaat : Dirk Burger
Promotor : Prof. Dr. J.A. Boon
Departement: Inligtingkunde
Graad : Philosophiae Doktor in Inligtingstegnologie
Titel : Die Ontwikkeling van ‘n Instrument om Strategiese Innoverende Omgewing van Lewensversekeringsmaatskappye in Suider-Afrika te meet

Hierdie proefskrif doen verslag oor ‘n verkennende studie om te bepaal tot watter mate ‘n instrument ontwikkeld kan word om die strategiese innoverende omgewing in lewensversekeringsmaatskappye in Suider-Afrika te meet. Die instrument was gebruik om ‘n aantal lewensversekeringsmaatskappye in Suider Afrika se operasionele omgewing te meet en die uitslag is op ‘n vier kwadrant matriks geplot wat vir die studie ontwikkel is.

Die belangrikste bydrae wat die studie lewer, is om die interaksie tussen die kennis-ekonomie, intellektuele kapitaal, die korporatiewe kurukullum, leerteorie en strategiese innovasie te verduidelik. Die studie argumenteer dat hierdie interaksie van kardinale belang is as mens menselike kapitaal wil ontwikkels wat ‘n sleutel rol speel tot die ontwikkeling van strategiese innovasie. Sekere veranderlikes word ook uitgelig wat die strategiese innoverende omgewing van ‘n maatskappy kan bevorder of inhiebeer. Verder kan die instrument wat vir die studie ontwikkel is, gebruik word om ander organisasies te evalueer om hulle te help om ook strategies innoverend te word.

Die studie het bevind dat lewensversekeringsmaatskappye in Suider-Afrika beskou kan word as gedeeltelik strategies innoverend. Die mate waarin hierdie maatskappye strategies innoverend is, hang af van die aanwesigheid en integrasie van sekere veranderlikes wat vir die organisasie bepaal is.

Sleutelwoorde: kennis; kennis-ekonomie; organisatoriese leer; intellektuele kapitaal; leerteorie; strategiese innovasie
Acknowledgements

My Heavenly Father for giving me the knowledge, strength, insight and wisdom to complete this thesis
Ilzette, for her continuous encouragement and understanding
My parents for all their love and support
Prof. Hans Boon for his support and guidance
The organisations for taking time to participate in the interviews

“When times are tough, persevere – you might just be surprised by the outcome....”

Dirk Burger
# CONTENTS

## CHAPTER 1: INTRODUCTION

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Chapter overview</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Research context</td>
<td>2</td>
</tr>
<tr>
<td>1.3 Problem statement and objectives</td>
<td>2</td>
</tr>
<tr>
<td>1.4 Fields of study</td>
<td>5</td>
</tr>
<tr>
<td>1.5 Scope and limitations</td>
<td>5</td>
</tr>
<tr>
<td>1.6 Research plan</td>
<td>9</td>
</tr>
<tr>
<td>1.7 Expected results</td>
<td>12</td>
</tr>
<tr>
<td>1.8 Chapter distribution</td>
<td>13</td>
</tr>
<tr>
<td>1.9 Summary</td>
<td>13</td>
</tr>
</tbody>
</table>

## CHAPTER 2: THE KNOWLEDGE ECONOMY

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Chapter overview</td>
<td>15</td>
</tr>
<tr>
<td>2.2 Introduction</td>
<td>16</td>
</tr>
<tr>
<td>2.3 Describing the knowledge economy</td>
<td>19</td>
</tr>
<tr>
<td>2.4 Comparison between the industrial economy and the knowledge economy</td>
<td>22</td>
</tr>
<tr>
<td>2.5 Impact of the knowledge economy on today’s workplace</td>
<td>27</td>
</tr>
<tr>
<td>2.6 Challenges for Africa</td>
<td>39</td>
</tr>
<tr>
<td>2.7 Conclusion</td>
<td>43</td>
</tr>
</tbody>
</table>

## CHAPTER 3: INTELLECTUAL CAPITAL AND ITS ROLE IN THE KNOWLEDGE ECONOMY

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Chapter overview</td>
<td>45</td>
</tr>
<tr>
<td>3.2 Introduction</td>
<td>46</td>
</tr>
<tr>
<td>3.3 Describing intellectual capital</td>
<td>47</td>
</tr>
<tr>
<td>3.4 Developing intellectual capital</td>
<td>62</td>
</tr>
<tr>
<td>3.5 Conclusion</td>
<td>67</td>
</tr>
</tbody>
</table>

## CHAPTER 4: THE STRATEGICALLY INNOVATIVE ORGANISATION

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Chapter overview</td>
<td>68</td>
</tr>
<tr>
<td>4.2 Introduction</td>
<td>69</td>
</tr>
<tr>
<td>4.3 Describing strategic innovation</td>
<td>73</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>4.4 The corporate curriculum framework</td>
<td>76</td>
</tr>
<tr>
<td>4.5 The learning theory matrix</td>
<td>80</td>
</tr>
<tr>
<td>4.6 Integrating the corporate curriculum, learning theory and strategic</td>
<td>89</td>
</tr>
<tr>
<td>innovation</td>
<td></td>
</tr>
<tr>
<td>4.7 The strategic innovation matrix</td>
<td>98</td>
</tr>
<tr>
<td>4.8 Measuring strategic innovation</td>
<td>102</td>
</tr>
<tr>
<td>4.9 Conclusion</td>
<td>105</td>
</tr>
</tbody>
</table>

**CHAPTER 5: RESEARCH METHODOLOGY**  
5.1 Chapter overview  
5.2 Rationale for this study  
5.3 Characteristics of case study research  
5.4 Alternative methods  
5.5 Research questions  
5.6 Methodology  
5.7 Conclusion  

**CHAPTER 6: FINDINGS**  
6.1 Chapter overview  
6.2 Discussion of results per variable across all organisations  
6.3 Discussion of results per organisation across all variables  
6.4 Concluding interpretations  

**CHAPTER 7: SYNTHESIS AND RECOMMENDATIONS**  
7.1 Chapter overview  
7.2 Introduction  
7.3 Synthesis  
7.4 Recommendations  
7.5 Limitations of this research  
7.6 Recommendations for further research  
7.7 Concluding remarks  

**REFERENCES**  
186

**ADDENDA**  
203
Addendum 1: Adapted Likert questionnaire
Addendum 2: Cronje and Burger's initial matrix on learning
Addendum 3: Construction and instruction explained
Addendum 4: Overview of cases selected to participate in this study
Addendum 5: Consolidated results per participating case

LIST OF TABLES
Table 1.1 Matrix to indicate data collection methods 11
Table 1.2 Chapter distribution 13
Table 2.1 The industrial economy versus the knowledge economy 23
Table 2.2 Historical timeline of ideal types of organisations in connection with external demands of the time 30
Table 2.3 A comparative overview of Senge’s learning organisation model and the three-dimension organisation learning framework 35
Table 4.1 Variables that promote or inhibit strategic innovation with reference to intellectual capital 70
Table 4.2 Traditional approach to innovation vs. a strategic innovation approach 74
Table 4.3 The eight pillars of the corporate curriculum 77
Table 4.4 Characteristics of constructivism 83
Table 4.5 Characteristics of instructivism 86
Table 4.6 Unplanned improvements quadrant 90
Table 4.7 Incremental innovation quadrant 92
Table 4.8 Serendipitous breakthroughs quadrant 95
Table 4.9 Strategic innovation quadrant 96
Table 4.10 Characteristics of the instruction axis 101
Table 4.11 Characteristics of the construction axis 102
Table 5.1 Characteristics of case study research 111
Table 5.2 Summary of participants 118
Table 5.3 Statements on the construction axis 121
Table 5.4 Statements on the instruction axis 122
Table 6.1 Results per variable across all organisations 130
Table 6.2 Summary of results per variable across all organisations and recommendations 150
Table 6.3 Summary of results per organisation across all variables 158
Table 7.1 Limitations of this research and the impact on this study 180

LIST OF FIGURES

Figure 1.1 Chapter overview 1
Figure 2.1 Chapter overview 15
Figure 2.2 The industrial economy vs. the knowledge economy value chain 17
Figure 2.3 The evolutionary path of knowledge in the knowledge economy 22
Figure 2.4 The corporate strategy logic 29
Figure 2.5 The growth loop 37
Figure 2.6 The new manager 38
Figure 3.1 Chapter overview 45
Figure 3.2 Describing intellectual capital in the knowledge economy 48
Figure 3.3 Measuring intellectual capital in the knowledge economy: The Skandia Navigator 52
Figure 3.4 Leadership challenges in the knowledge economy 53
Figure 3.5 Levels of information access in the knowledge economy 54
Figure 3.6 Relationship between intellectual capital components in the knowledge economy 59
Figure 4.1 Chapter overview 68
Figure 4.2 Four types of innovation 75
Figure 4.3 Cronje and Burger’s (2006) learning matrix 80
Figure 4.4 Cyclical pattern of learning 87
Figure 4.5 Integrated matrix towards strategic innovation 100
Figure 4.6 Family of metrics to measure innovation 104
Figure 5.1 Chapter overview 107
Figure 6.1 Chapter overview 126
Figure 7.1 Chapter overview 161